11/06/2020	Kit Components
Product code	Description
XINF-KIT-19	CUSTOM ORGANIC STANDARD
Components:	
BTEX-2-1H	Alternate BTEX Standard
CLPV-AH	VO IND. BLENDS MIX A
CLPV-A	Volatile Analyte Mix A
NEAT-2458	METHYL SALICYLATE
GRO-1000	GASOLINE RANGE ORGANICS
NEAT-3505	TOLUENE
NEAT-3873	Custom Organic Standard-Unleaded Gasoline
P-GAS	Purgeable Aromatics for Gasoline Identification
TCLP-V	TCLP Volatiles Spike without Vinyl Chloride
THM-X-400	TRIHALOMETHANES

CUSTOM INT STD

Custom

METHANOL

Custom 5 compound organic standard

XINF-IS-4

XQ-1314 XQ-3603

XS-2380-30ML

1 Identification

- · Product identifier
- · Product Name: Alternate BTEX Standard
- · Part Name: BTEX-2-1H
- $\cdot \textbf{\textit{Application of the substance / the mixture } \textit{Certified Reference Material} \\$
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS08

· Signal word Danger

· Hazard-determining components of labeling:

methanol

benzene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P210

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

(Contd. on page 2)

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Alternate BTEX Standard

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1 Fire = 3 Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
67-56-1	methanol	99.0%
71-43-2	benzene	0.2%
100-41-4	ethylbenzene	0.2%
108-88-3	toluene	0.2%
· Chemical	identification of the substance/preparation	
05 47 6	o rylana	0.2%

· Chemical identification of the substance/preparation		
95-47-6	o-xylene	0.2%
106-42-3	p-xylene	0.1%
108-38-3	m-xylene	0.1%

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.

(Contd. on page 3)

Product Name: Alternate BTEX Standard

(Contd. of page 2)

- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:			
67-56-1	methanol	530 ррг	
71-43-2	benzene	52 ppm	
100-41-4	ethylbenzene	33 ppm	
108-88-3	toluene	67 ppm	
108-38-3	m-xylene	130 ррг	
· PAC-2:		-	
67-56-1	methanol	2,100 ppn	
71-43-2	benzene	800 ppm	
100-41-4	ethylbenzene	1100* pp	
108-88-3	toluene	560 ppm	
108-38-3	m-xylene	920 ppm	
· PAC-3:	PAC-3:		
67-56-1	methanol	7200* pp	
71-43-2	benzene	4000* pp	
100-41-4	ethylbenzene	1800* pp	
108-88-3	toluene	3700* pp	
108-38-3	m-xylene	2500* pp	

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

 ${\it Keep \ receptacle \ tightly \ sealed}.$

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

Product Name: Alternate BTEX Standard

(Contd. of page 3)

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8 Exposure controls/personal protection
 · Additional information about design of technical systems: No further data; see item 7.
 · Control parameters
 · Components with limit values that require monitoring at the workplace:
  67-56-1 methanol
  PEL Long-term value: 260 mg/m³, 200 ppm
  REL Short-term value: 325 mg/m³, 250 ppm
        Long-term value: 260 mg/m³, 200 ppm
        Skin
       Short-term value: 328 mg/m³, 250 ppm
        Long-term value: 262 mg/m³, 200 ppm
       Skin; BEI
  71-43-2 benzene
  PEL Short-term value: 15* mg/m³, 5* ppm
       Long-term value: 3* mg/m³, 1* ppm
        *table Z-2 for exclusions in 29ĈFR1910.1028(d)
  REL Short-term value: 1 ppm
        Long-term value: 0.1 ppm
        See Pocket Guide App. A
  TLV Short-term value: 8 mg/m<sup>3</sup>, 2.5 ppm
       Long-term value: 1.6 mg/m³, 0.5 ppm
       Skin; BEI
  100-41-4 ethylbenzene
  PEL Long-term value: 435 mg/m³, 100 ppm
  REL Short-term value: 545 mg/m³, 125 ppm
       Long-term value: 435 mg/m³, 100 ppm
  TLV Long-term value: 87 mg/m³, 20 ppm
       BEI
  108-88-3 toluene
  PEL Long-term value: 200 ppm
       Ceiling limit value: 300; 500* ppm
        *10-min peak per 8-hr shift
  REL Short-term value: 560 mg/m³, 150 ppm
       Long-term value: 375 mg/m³, 100 ppm
  TLV Long-term value: 75 mg/m³, 20 ppm
       BEI
 · Ingredients with biological limit values:
  67-56-1 methanol
  BEI 15 mg/L
       Medium: urine
       Time: end of shift
       Parameter: Methanol (background, nonspecific)
  71-43-2 benzene
  BEI 25 μg/g creatinine
       Medium: urine
       Time: end of shift Parameter
       Parameter: S-Phenylmercapturic acid (background
       500 μg/g creatinine
       Medium: urine
      Time: end of shift
       Parameter: t,t-Muconic acid (background)
  100-41-4 ethylbenzene
  BEI 0.7 g/g creatinine
       Medium: urine
       Time: end of shift at end of workweek
       Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)
       Medium: end-exhaled air
       Time: not critical
       Parameter: Ethyl benzene (semi-quantitative)
```

Product Name: Alternate BTEX Standard

(Contd. of page 4)

108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid

According to product specification Color: · Odor:

Characteristic · Odour Threshold: Not applicable.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined. 64.7 °C (148.5 °F) Boiling point/Boiling range: · Flash point: < 23 °C (< 73.4 °F) Not applicable. · Flammability (solid, gaseous):

(Contd. on page 6)

Product Name: Alternate BTEX Standard

	(Contd. of page
· Ignition temperature:	455 °C (851 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits: Lower: Upper:	5.5 Vol % 44 Vol %
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Density at 20 °C (68 °F) · Relative density · Vapor density · Evaporation rate	0.79081 g/cm³ (6.59931 lbs/gal) Not applicable. Not applicable. Not applicable.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	er): Not applicable.
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.
· Solvent content: Organic solvents: VOC content:	100.0 % 100.00 %
Solids content: · Other information	0.0 % No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- $\cdot \textbf{Incompatible materials:} \ No \ further \ relevant \ information \ available.$
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50	· LD/LC50 values that are relevant for classification:		
67-56-1 m	67-56-1 methanol		
Oral	Oral LD50 5,628 mg/kg (rat)		
Dermal	Dermal LD50 15,800 mg/kg (rabbit)		
71-43-2 be	71-43-2 benzene		
Oral	Oral LD50 4,894 mg/kg (rat)		
Dermal LD50 48 mg/kg (mouse)			
	Inhalative LC50/4 h 9,980 mg/l (mouse)		

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

The product can cause inheritable damage.

(Contd. on page 7)

Product Name: Alternate BTEX Standard

(Contd. of page 6) · Carcinogenic categories · IARC (International Agency for Research on Cancer) 71-43-2 benzene 95-47-6 o-xylene 3 100-41-4 ethylbenzene 2B108-88-3 toluene 106-42-3 p-xylene 3 108-38-3 m-xylene 3 · NTP (National Toxicology Program) 71-43-2 benzene K · OSHA-Ca (Occupational Safety & Health Administration)

12 Ecological information

71-43-2 benzene

- · Aquatic toxicity: No further relevant information available.
- $\cdot \textit{Persistence and degradability} \ \textit{No further relevant information available}.$
- · Behavior in environmental systems:
- $\cdot \textbf{\it Bioaccumulative potential \it No further relevant information available.}$
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- · UN-Number
- · DOT, ADR, IMDG, IATA UN1230

· UN proper shipping name

 $\cdot DOT$

Methanol $\cdot ADR$ 1230 METHANOL · IMDG, IATA **METHANOL**

- · Transport hazard class(es)
- $\cdot DOT$



Class 3 Flammable liquids

(Contd. on page 8)

Product Name: Alternate BTEX Standard

(Contd. of page 7) \cdot Label 3, 6.1 $\cdot ADR$ 3 Flammable liquids · Class · Label 3+6.1 \cdot IMDG 3 Flammable liquids · Class · Label 3/6.1 \cdot IATA · Class 3 Flammable liquids · Label 3(6.1)· Packing group · DOT, ADR, IMDG, IATA II · Environmental hazards: Not applicable. Warning: Flammable liquids · Special precautions for user · Hazard identification number (Kemler code): 336 · EMS Number: F-E,S-D· Stowage Category SW2 Clear of living quarters. · Stowage Code · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Not applicable. · Transport/Additional information: $\cdot ADR$ · Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml \cdot IMDG · Limited quantities (LQ) 1LCode: E2 · Excepted quantities (EQ) Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml · UN "Model Regulation": UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- $\cdot \textit{Safety, health and environmental regulations/legislation specific for the substance or \textit{mixture}}$
- · Sara
- · Section 313 (Specific toxic chemical listings):

All ingredients are listed.

- · TSCA (Toxic Substances Control Act):
- All components have the value ACTIVE.
- · Hazardous Air Pollutants

All ingredients are listed.

(Contd. on page 9)

Product Name: Alternate BTEX Standard

Proposition 65

Chemicals known to cause cancer:

71-43-2 benzene

100-41-4 ethylbenzene

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

71-43-2 benzene

Chemicals known to cause developmental toxicity:

67-56-1 methanol

71-43-2 benzene

108-88-3 toluene

· Carcinogenic categories

· EPA (En	· EPA (Environmental Protection Agency)	
71-43-2		A, K/L
95-47-6		I
100-41-4	ethylbenzene	D
108-88-3		II
106-42-3		I
108-38-3	m-xylene	I

· TLV (Thi	· TLV (Threshold Limit Value established by ACGIH)		
1		A1	
	· · · · · · · · · · · · · · · · · · ·	A4	
1		A3	
108-88-3		A4	
106-42-3	p-xylene	A4	
108-38-3	m-rylene	A4	

· NIOSH-Ca (National Institute for Occupational Safety and Health)

71-43-2 benzene

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHSO

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

benzene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

(Contd. on page 10)

Product Name: Alternate BTEX Standard

(Contd. of page 9)

P403+P235 Store in a well-ventilated place. Keep cool.

P405

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

· Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

· Date of preparation / last revision 11/06/2020 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity - Category 3

Muta. 1B: Germ cell mutagenicity – Category 1B Carc. 1A: Carcinogenicity – Category 1A

Repr. 2: Reproductive toxicity – Category 2 STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

1 Identification

- · Product identifier
- · Product Name: VO IND. BLENDS MIX A
- · Part Name: CLPV-AH
- · Restrictions

This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal.

- $\cdot \textbf{\textit{Application of the substance / the mixture}} \ Certified \ Reference \ Material$
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen, NJ 08840 USA
- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Carc. 1B H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

propylene dichloride

carbon tetrachloride

1,1,2,2-tetrachloroethane

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

(Contd. on page 2)

Product Name: VO IND. BLENDS MIX A

(Contd. of page 1)

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1 Fire = 3Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangeroi	s components:	
67-56-1	methanol	97.0%
56-23-5	carbon tetrachloride	0.2%
67-66-3	chloroform	0.2%
75-09-2	dichloromethane	0.2%
	bromoform	0.2%
75-35-4	1,1-dichloroethylene	0.2%
78-87-5	propylene dichloride	0.2%
79-00-5	1,1,2-trichloroethane	0.2%
79-01-6	trichloroethylene	0.2%
79-34-5	1,1,2,2-tetrachloroethane	0.2%
107-06-2	1,2-dichloroethane	0.2%
124-48-1	dibromochloromethane	0.2%
127-18-4	tetrachloroethylene	0.2%
· Chemical	identification of the substance/preparation	
75-34-3	1,1-dichloroethane	0.2%
108-90-7	chlorobenzene	0.2%

4 First-aid measures

· Description of first aid measures

156-60-5 trans-dichloroethylene

· General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

(Contd. on page 3)

0.2%

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: VO IND. BLENDS MIX A

(Contd. of page 2)

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- $\cdot \textbf{\textit{Suitable extinguishing agents: CO2}, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. \\$
- Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

67-56-1	methanol	530 ppm
	carbon tetrachloride	1.2 ppm
	chloroform	2 ppm
	dichloromethane	200 ppm
75-25-2	bromoform	1.5 ppm
	1,1-dichloroethane	300 ppm
75-35-4	1,1-dichloroethylene	45 ppm
78-87-5	propylene dichloride	30 ррт
79-00-5	1,1,2-trichloroethane	30 ppm
79-01-6	trichloroethylene	130 ppm
79-34-5	1,1,2,2-tetrachloroethane	3 ppm
107-06-2	1,2-dichloroethane	50 ppm
108-90-7	chlorobenzene	10 ppm
124-48-1	dibromochloromethane	1.1 mg/m
127-18-4	tetrachloroethylene	35 ppm
156-60-5	trans-dichloroethylene	280 ppm
PAC-2:		<u> </u>
67-56-1	methanol	2,100 ppn
56-23-5	carbon tetrachloride	13 ppm
67-66-3	chloroform	64 ppm
75-09-2	dichloromethane	560 ppm
75-25-2	bromoform	6.8 ppm
75-34-3	1,1-dichloroethane	670 ppm
75-35-4	1,1-dichloroethylene	500 ppm

Product Name: VO IND. BLENDS MIX A

		(Contd. of page 3)
78-87-5 pro	opylene dichloride	220 ppm
79-00-5 1,1	1,2-trichloroethane	180 ppm
79-01-6 tri	ichloroethylene	450 ppm
79-34-5 1,1	1,2,2-tetrachloroethane	120 ppm
107-06-2 1,2	2-dichloroethane	200 ppm
108-90-7 chi	lorobenzene	150 ppm
124-48-1 dil	bromochloromethane	12 mg/m³
127-18-4 tet	trachloroethylene	230 ppm
156-60-5 tra	ans-dichloroethylene	1,000 ppm
· PAC-3:		•
67-56-1 me	ethanol	7200* ppm
56-23-5 car	rbon tetrachloride	340 ppm
67-66-3 chi	loroform	3,200 ppm
75-09-2 dic	chloromethane	6,900 ppm
75-25-2 bro	romoform	41 ppm
75-34-3 1,1	1-dichloroethane	4,000 ppm
75-35-4 1,1	1-dichloroethylene	1,000 ppm
78-87-5 pro	opylene dichloride	2,000 ppm
79-00-5 1,1	1,2-trichloroethane	500 ppm
79-01-6 tri	ichloroethylene	3,800 ppm
79-34-5 1,1	1,2,2-tetrachloroethane	150 ppm
107-06-2 1,2	2-dichloroethane	300 ppm
108-90-7 chi	lorobenzene	400 ppm
124-48-1 dil	bromochloromethane	73 mg/m³
127-18-4 tet	trachloroethylene	1,200 ppm
156-60-5 tra	ans-dichloroethylene	1,700 ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: Store in a cool location.
- $\cdot \textit{Information about storage in one common storage facility:} \ \textit{Not required}.$
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

67-56-1 methanol

PEL	Long-term value: 260 mg/m³, 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm
	Long-term value: 260 mg/m³, 200 ppm
	Skin

(Contd. on page 5)

Reviewed on 05/08/2020 Printing date 11/06/2020

Product Name: VO IND. BLENDS MIX A

TIV	Short-term value: 328 mg/m³, 250 ppm	(Contd. of page
ILV	Snort-term value: 528 mg/m², 230 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI	
56.2	3-5 carbon tetrachloride	
PEL	Long-term value: 10 ppm Ceiling limit value: 25; 200* ppm *5-min peak in any 4 hrs	
REL	Short-term value: 12.6* mg/m³, 2* ppm *60-min;See Pocket Guide App. A	
	Short-term value: 63 mg/m³, 10 ppm Long-term value: 31 mg/m³, 5 ppm Skin	
67-66	6-3 chloroform	
PEL	Ceiling limit value: 240 mg/m³, 50 ppm	
REL	Short-term value: 9.78* mg/m³, 2* ppm *60-min; See Pocket Guide App. A	
TLV	Long-term value: 49 mg/m³, 10 ppm	
75-09	9-2 dichloromethane	
PEL	Short-term value: 125 ppm	
	Long-term value: 25 ppm see 29 CFR 1910.1052	
REL	See Pocket Guide App. A	
	Long-term value: 174 mg/m³, 50 ppm BEI	
75-25	5-2 bromoform	
PEL	Long-term value: 5 mg/m³, 0.5 ppm Skin	
REL	Long-term value: 5 mg/m³, 0.5 ppm Skin	
TLV	Long-term value: 5.2 mg/m³, 0.5 ppm	
75-35	5-4 1,1-dichloroethylene	
	See Pocket Guide App.A	
	Long-term value: 20 mg/m³, 5 ppm	
	7-5 propylene dichloride	
	Long-term value: 350 mg/m³, 75 ppm	
	See Pocket Guide App. A	
TLV	Long-term value: 46 mg/m³, 10 ppm DSEN	
	0-5 1,1,2-trichloroethane	
	Long-term value: 45 mg/m³, 10 ppm	
	Skin Long-term value: 45 mg/m³, 10 ppm	
	Skin; See Pocket Guide Apps.A and C Long-term value: 55 mg/m³, 10 ppm	
	Skin 1-6 trichloroethylene	
	Long-term value: 100 ppm	
PEL	Ceiling limit value: 200; 300* ppm *5-min peak in any 2 hrs	
REL	See Pocket Guide Apps. A and C	
	Short-term value: 135 mg/m³, 25 ppm Long-term value: 54 mg/m³, 10 ppm BEI	
79-34	4-5 1,1,2,2-tetrachloroethane	
	Long-term value: 35 mg/m³, 5 ppm Skin	
	Long-term value: 7 mg/m³, 1 ppm Skin; See Pocket Guide Apps. A and C	
	Long-term value: 6.9 mg/m³, 1 ppm Skin	
		(Contd. on page

Product Name: VO IND. BLENDS MIX A

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(Contd. of page 5)
107-06-2 1,2-dichloroethane
PEL Long-term value: 50 ppm
      Ceiling limit value: 100; 200* ppm
      *5-min peak in any 3 hrs
REL Short-term value: 8 mg/m³, 2 ppm
      Long-term value: 4 mg/m³, 1 ppm
      See Pocket Guide Apps. A and C
TLV Long-term value: 40 mg/m<sup>3</sup>, 10 ppm
127-18-4 tetrachloroethylene
PEL Long-term value: 100 ppm
      Ceiling limit value: 200; 300* ppm
      *5-min peak in any 3 hrs
REL Minimize workplace exp. concs.; Pocket Guide App. A
TLV Short-term value: 685 mg/m³, 100 ppm
      Long-term value: 170 mg/m³, 25 ppm
Ingredients with biological limit values:
67-56-1 methanol
BEI 15 mg/L
     Medium: urine
     Time: end of shift
     Parameter: Methanol (background, nonspecific)
75-09-2 dichloromethane
BEI 0.3 mg/L
     Medium: urine
     Time: end of shift
     Parameter: Dichloromethane (semi-quantitative)
79-01-6 trichloroethylene
BEI 15 mg/L
     Medium: urine
     Time: end of shift at end of workweek
     Parameter: Trichloroacetic acid (nonspecific)
     0.5 \, mg/L
     Medium: blood
     Time: end of shift at end of workweek
     Parameter: Trichloroethanol without hydrolysis (nonspecific)
     Medium: blood
     Time: end of shift at end of workweek
     Parameter: Trichloroethylene (semi-quantitative)
     Medium: end-exhaled air
     Time: end of shift at end of workweek
     Parameter: Trichloroethylene (semi-quantitative)
127-18-4 tetrachloroethylene
BEI 3 ppm
     Medium: end-exhaled air
     Time: prior to shift
     Parameter: Tetrachloroethylene
     0.5 \, mg/L
     Medium: blood
     Time: prior to shift
     Parameter: Tetrachloroethylene
```

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Product Name: VO IND. BLENDS MIX A

(Contd. of page 6)

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/the substance/the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- \cdot Eye protection:



Tightly sealed goggles

9 Physical and chemical propertie	S
Information on basic physical and c General Information Appearance: Form: Color: Odor: Odour Threshold:	hemical properties Liquid According to product specification Characteristic Not applicable.
· pH-value:	Not applicable.
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 64.7 °C (148.5 °F)
· Flash point:	< 23 °C (< 73.4 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	455 °C (851 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits: Lower: Upper:	5.5 Vol % 44 Vol %
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Density at 20 °C (68 °F) · Relative density · Vapor density · Evaporation rate	0.81232 g/cm³ (6.77881 lbs/gal) Not applicable. Not applicable. Not applicable.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	r): Not applicable.
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.
· Solvent content: Organic solvents:	98.4 %

(Contd. on page 8)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: VO IND. BLENDS MIX A

VOC content: 98.00 %

Solids content: 0.2 %
Other information No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC5	· LD/LC50 values that are relevant for classification:			
67-56-1	67-56-1 methanol			
Oral	LD50	5,628 mg/kg (rat)		
Dermal	LD50	15,800 mg/kg (rabbit)		
56-23-5	carbor	tetrachloride		
Oral	LD50	2,350 mg/kg (rat)		
Dermal	LD50	5,070 mg/kg (rat)		
1		roethylene		
Oral	LD50	2,402 mg/kg (mouse)		
Dermal	LD50	8,450 mg/kg (mouse)		
79-34-5	1,1,2,2	-tetrachloroethane		
Oral	LD50	800 mg/kg (rat)		
1		ichloroethane		
Oral	LD50	670 mg/kg (rat)		
Dermal	<i>LD50</i>	2,800 mg/kg (rat)		

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- $\cdot Additional\ toxicological\ information:$

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

· Carcinogenic categories

	enic categories	
· IARC (In	ternational Agency for Research on Cancer)	
56-23-5	carbon tetrachloride	28
67-66-3	chloroform	28
75-09-2	dichloromethane	2A
75-25-2	bromoform	3
75-35-4	1,1-dichloroethylene	28
78-87-5	propylene dichloride	1
79-00-5	1,1,2-trichloroethane	3
79-01-6	trichloroethylene	1
79-34-5	1,1,2,2-tetrachloroethane	28
107-06-2	1,2-dichloroethane	28
124-48-1	dibromochloromethane	3
127-18-4	tetrachloroethylene	2A
· NTP (Na	ional Toxicology Program)	
56-23-5	carbon tetrachloride	R

(Contd. on page 9)

Product Name: VO IND. BLENDS MIX A

	67.66.2	chloroform	(Contd. of page 8)		
		, v			
	75-09-2	dichloromethane	R		
		trichloroethylene	K		
		1,2-dichloroethane	R		
	127-18-4	tetrachloroethylene	R		
	· OSHA-Ca (Occupational Safety & Health Administration)				
- 2	75-09-2 dichloromethane				

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- $\cdot \textbf{\it Bioaccumulative potential \it No \it further relevant information available.}$
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- $\cdot \textit{Uncleaned packagings:}$
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

1 4 700		C .	
14 Trans	port in	tormai	non

- · UN-Number
- · DOT, ADR, IMDG, IATA

UN1230

· UN proper shipping name

· Transport hazard class(es)

 $\cdot DOT$ $\cdot ADR$ Methanol

· ADK

1230 METHANOL METHANOL

- · IMDG, IATA
- $\cdot DOT$





· Class 3 Flammable liquids

• **Label** 3, 6.1

 $\cdot ADR$





· Class 3 Flammable liquids

(Contd. on page 10)

Product Name: VO IND. BLENDS MIX A

(Contd. of page 9) \cdot Label 3+6.1 \cdot IMDG 3 Flammable liquids · Class $\cdot \textit{Label}$ 3/6.1 \cdot IATA 3 Flammable liquids · Class · Label 3(6.1)· Packing group · DOT, ADR, IMDG, IATA II · Environmental hazards: Not applicable. · Special precautions for user Warning: Flammable liquids · Hazard identification number (Kemler code): 336 · EMS Number: F-E,S-D· Stowage Category · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. · Transport/Additional information: · Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml \cdot *IMDG* · Limited quantities (LQ) 1L· Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml · UN "Model Regulation": UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara

67-56-1 methanol 56-23-5 carbon tetrachloride 67-66-3 chloroform 75-09-2 dichloromethane 75-25-2 bromoform 75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	· Section 3.	13 (Specific toxic chemical listings):
67-66-3 chloroform 75-09-2 dichloromethane 75-25-2 bromoform 75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	67-56-1	methanol
75-09-2 dichloromethane 75-25-2 bromoform 75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	56-23-5	carbon tetrachloride
75-25-2 bromoform 75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene		Ÿ
75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	75-09-2	dichloromethane
75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	75-25-2	bromoform
78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	75-34-3	1,1-dichloroethane
79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene		· · · · · · · · · · · · · · · · · · ·
79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	78-87-5	propylene dichloride
79-34-5	79-00-5	1,1,2-trichloroethane
107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene	79-01-6	trichloroethylene
108-90-7 chlorobenzene		
127-18-4 tetrachloroethylene	108-90-7	chlorobenzene
127-10-4 tetracitorocitiyiche	127-18-4	tetrachloroethylene

(Contd. on page 11)

Product Name: VO IND. BLENDS MIX A

(Contd. of page 10) · TSCA (Toxic Substances Control Act): This chemical/product is not and cannot be distributed in commerce (as defined in TSCA section 3(5)) or processed (as defined in TSCA section 3(13)) for consumer paint or coating removal. All components have the value ACTIVE. · Hazardous Air Pollutants 67-56-1 methanol 56-23-5 carbon tetrachloride 67-66-3 chloroform 75-09-2 dichloromethane 75-25-2 bromoform 75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 108-90-7 chlorobenzene 127-18-4 tetrachloroethylene Proposition 65 · Chemicals known to cause cancer: 56-23-5 carbon tetrachloride 67-66-3 chloroform 75-09-2 dichloromethane 75-25-2 bromoform 75-34-3 1,1-dichloroethane 75-35-4 1,1-dichloroethylene 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 127-18-4 tetrachloroethylene · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for males: 79-01-6 trichloroethylene · Chemicals known to cause developmental toxicity: 67-56-1 methanol 67-66-3 chloroform 79-01-6 trichloroethylene · Carcinogenic categories · EPA (Environmental Protection Agency) 56-23-5 carbon tetrachloride 67-66-3 chloroform B2, L, NL 75-09-2 dichloromethane L 75-25-2 bromoform В2 75-34-3 1,1-dichloroethane C75-35-4 1,1-dichloroethylene *C*, *S* (*inh*.), *I* (*oral*) 79-00-5 1,1,2-trichloroethane C79-01-6 trichloroethylene СаН 79-34-5 1,1,2,2-tetrachloroethane I. 107-06-2 1,2-dichloroethane В2 108-90-7 chlorobenzene D 124-48-1 dibromochloromethane C127-18-4 tetrachloroethylene L

Product Name: VO IND. BLENDS MIX A

156-60-5	trans-dichloroethylene	(Contd. of page
	eshold Limit Value established by ACGIH)	<u> </u>
	carbon tetrachloride	A
67-66-3	chloroform	
	dichloromethane	
75-25-2	bromoform	
75-34-3	1,1-dichloroethane	1
75-35-4	1,1-dichloroethylene	1
78-87-5	propylene dichloride	2
79-00-5	1,1,2-trichloroethane	
79-01-6	trichloroethylene	4
79-34-5	1,1,2,2-tetrachloroethane	1
107-06-2	1,2-dichloroethane	1
108-90-7	chlorobenzene	1
127-18-4	tetrachloroethylene	1
NIOSH-C	a (National Institute for Occupational Safety and Health)	·
56-23-5	carbon tetrachloride	
67-66-3	chloroform	
75-09-2	dichloromethane	
78-87-5	propylene dichloride	
79-00-5	1,1,2-trichloroethane	
	trichloroethylene	
79-34-5	1,1,2,2-tetrachloroethane	
	1,2-dichloroethane	
127-18-4	tetrachloroethylene	

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GF

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

propylene dichloride

carbon tetrachloride

1,1,2,2-tetrachloroethane

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 13)

Product Name: VO IND. BLENDS MIX A

(Contd. of page 12)

- · National regulations:
- · Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2 Acute Tox. 3: Acute toxicity – Category 3 Carc. 1B: Carcinogenicity – Category 1B

Repr. 2: Reproductive toxicity – Category 2 STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

1 Identification

- · Product identifier
- · Product Name: Volatile Analyte Mix A
- · Part Name: CLPV-A
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Product Name: Volatile Analyte Mix A

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. of page 1)

- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerou	s components:	
67-56-1 1	nethanol	99.7%
· Chemical	identification of the substance/preparation	
56-23-5	carbon tetrachloride	0.02%
67-66-3	chloroform	0.02%
75-09-2	dichloromethane	0.02%
75-25-2	bromoform	0.02%
75-34-3	1,1-dichloroethane	0.02%
75-35-4	1,1-dichloroethylene	0.02%
<i>78-87-5</i>	propylene dichloride	0.02%
79-00-5	1,1,2-trichloroethane	0.02%
	trichloroethylene	0.02%
79-34-5	1,1,2,2-tetrachloroethane	0.02%
107-06-2	1,2-dichloroethane	0.02%
108-90-7	chlorobenzene	0.02%
124-48-1	dibromochloromethane	0.02%
	tetrachloroethylene	0.02%
156-60-5	trans-dichloroethylene	0.02%

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

Product Name: Volatile Analyte Mix A

(Contd. of page 2)

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

67-56-1	l methanol	530 ppm
	5 carbon tetrachloride	1.2 ppm
	3 chloroform	2 ppm
	2 dichloromethane	200 ppm
75-25-2	2 bromoform	1.5 ppm
	3 1,1-dichloroethane	300 ppm
	4 1,1-dichloroethylene	45 ppm
78-87-5	5 propylene dichloride	30 ppm
79-00-5	5 1,1,2-trichloroethane	30 ppm
79-01-6	6 trichloroethylene	130 ppm
79-34-5	5 1,1,2,2-tetrachloroethane	3 ppm
107-06-2	2 1,2-dichloroethane	50 ppm
108-90-7	7 chlorobenzene	10 ppm
124-48-1	dibromochloromethane	1.1 mg/n
127-18-4	4 tetrachloroethylene	35 ppm
156-60-5	5 trans-dichloroethylene	280 ppm
PAC-2:		
67-56-1		
07-30-1	l methanol	2,100 ppi
	I methanol 5 carbon tetrachloride	2,100 ppi 13 ppm
56-23-5		= =
56-23-5 67-66-3	5 carbon tetrachloride	13 ppm
56-23-5 67-66-3 75-09-2	5 carbon tetrachloride 3 chloroform	13 ppm 64 ppm
56-23-5 67-66-3 75-09-2 75-25-2	5 carbon tetrachloride 3 chloroform 2 dichloromethane	13 ppm 64 ppm 560 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform	13 ppm 64 ppm 560 ppm 6.8 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane 4 1,1-dichloroethylene	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5 79-00-5	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane 4 1,1-dichloroethylene 5 propylene dichloride	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm 220 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5 79-00-5	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 I,I-dichloroethane 4 I,I-dichloroethylene 5 propylene dichloride 5 I,I,2-trichloroethane	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm 220 ppm 180 ppm 450 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5 79-00-5 79-01-6	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane 4 1,1-dichloroethylene 5 propylene dichloride 5 1,1,2-trichloroethane 6 trichloroethylene	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm 220 ppm 180 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5 79-01-6 79-34-5 107-06-2	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane 4 1,1-dichloroethylene 5 propylene dichloride 5 1,1,2-trichloroethane 6 trichloroethylene 5 1,1,2,2-tetrachloroethane	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm 220 ppm 180 ppm 450 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5 79-00-5 79-01-6 107-06-2 108-90-7	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane 4 1,1-dichloroethylene 5 propylene dichloride 5 1,1,2-trichloroethane 6 trichloroethylene 5 1,1,2,2-tetrachloroethane 2 1,2-dichloroethane	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm 220 ppm 180 ppm 450 ppm 120 ppm
56-23-5 67-66-3 75-09-2 75-25-2 75-34-3 75-35-4 78-87-5 79-01-6 79-34-5 107-06-2 108-90-7 124-48-1	5 carbon tetrachloride 3 chloroform 2 dichloromethane 2 bromoform 3 1,1-dichloroethane 4 1,1-dichloroethylene 5 propylene dichloride 5 1,1,2-trichloroethane 6 trichloroethylene 5 1,1,2,2-tetrachloroethane 2 1,2-dichloroethane 7 chlorobenzene	13 ppm 64 ppm 560 ppm 6.8 ppm 670 ppm 500 ppm 220 ppm 180 ppm 450 ppm 120 ppm 200 ppm

Product Name: Volatile Analyte Mix A

DLG 2	(Contd. of pag
PAC-3:	
67-56-1 methanol	$7200*p_{1}$
56-23-5 carbon tetrachloride	340 ppm
67-66-3 chloroform	3,200 рр
75-09-2 dichloromethane	6,900 рр
75-25-2 bromoform	41 ppm
75-34-3 1,1-dichloroethane	4,000 рр
75-35-4 1,1-dichloroethylene	1,000 рр
78-87-5 propylene dichloride	2,000 рр
79-00-5 1,1,2-trichloroethane	500 ppm
79-01-6 trichloroethylene	3,800 рр
79-34-5 1,1,2,2-tetrachloroethane	150 ppm
107-06-2 1,2-dichloroethane	300 ppm
108-90-7 chlorobenzene	400 ppm
124-48-1 dibromochloromethane	73 mg/m
127-18-4 tetrachloroethylene	1,200 рр
156-60-5 trans-dichloroethylene	1,700 pp

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- $\cdot \textit{Further information about storage conditions:} \\$

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- $\cdot \textbf{\textit{Additional information about design of technical systems:} \ \textit{No further data; see item 7.} \\$
- · Control parameters

· Components wi	th limit values	that require mon	itoring at the workplace	:

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

· Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 5)

Product Name: Volatile Analyte Mix A

(Contd. of page 4)

- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid

Color: According to product specification

Odor: Characteristic
 Odour Threshold: Not applicable.
 pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 64.7 °C (148.5 °F)

• Flash point: $< 23 \, ^{\circ}C \, (< 73.4 \, ^{\circ}F)$

· Flammability (solid, gaseous): Not applicable.

• Ignition temperature: 455 °C (851 °F)
• Decomposition temperature: Not applicable.

· Auto igniting: Product is not selfigniting.

• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

 Lower:
 5.5 Vol %

 Upper:
 44 Vol %

· Vapor pressure at 20 °C (68 °F): 128 hPa (96 mm Hg)

• Density at 20 °C (68 °F) 0.79223 g/cm³ (6.61116 lbs/gal)

Relative density
 Vapor density
 Evaporation rate
 Not applicable.
 Not applicable.

(Contd. on page 6)

Product Name: Volatile Analyte Mix A

(Contd. of page 5) · Solubility in / Miscibility with Fully miscible. Water: · Partition coefficient (n-octanol/water): Not applicable. · Viscosity: Dynamic: Not applicable. Not applicable. Kinematic: · Solvent content: Organic solvents: 99.8 % 99.80 % **VOC** content: 0.0 % Solids content: · Other information No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC5	0 valu	es that are relevant for classification:
67-56-1	metha	nol
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- $\cdot \textit{Additional toxicological information:}$

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

· Carcinogenic categories

· IARC (In	ternational Agency for Research on Cancer)	
56-23-5	carbon tetrachloride	28
67-66-3	chloroform	2 <i>E</i>
75-09-2	dichloromethane	2A
75-25-2	bromoform	3
75-35-4	1,1-dichloroethylene	2 <i>E</i>
78-87-5	propylene dichloride	1
79-00-5	1,1,2-trichloroethane	3
79-01-6	trichloroethylene	1
79-34-5	1,1,2,2-tetrachloroethane	21
107-06-2	1,2-dichloroethane	28
124-48-1	dibromochloromethane	3
127-18-4	tetrachloroethylene	2A
· NTP (Nat	tional Toxicology Program)	·
56-23-5	carbon tetrachloride	K
67-66-3	chloroform	K
75-09-2	dichloromethane	K
79-01-6	trichloroethylene	K
107-06-2	1,2-dichloroethane	K
127-18-4	tetrachloroethylene	,
		(Contd. on page

Product Name: Volatile Analyte Mix A

(Contd. of page 6)

· OSHA-Ca (Occupational Safety & Health Administration)

75-09-2 dichloromethane

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- · UN-Number
- · DOT, ADR, IMDG, IATA

UN1230

- · UN proper shipping name
- $\cdot DOT$ $\cdot ADR$
- · IMDG, IATA

Methanol

- 1230 METHANOL
- **METHANOL**

- · Transport hazard class(es)
- $\cdot DOT$





· Class · Label

3 Flammable liquids

 $\cdot ADR$





· Class · Label 3 Flammable liquids

3+6.1

· IMDG





Class 3 Flammable liquids

(Contd. on page 8)

Product Name: Volatile Analyte Mix A

(Contd. of page 7) · Label 3/6.1 \cdot IATA 3 Flammable liquids · Class · Label 3 (6.1) · Packing group · DOT, ADR, IMDG, IATA II Not applicable. · Environmental hazards: Warning: Flammable liquids $\cdot \textit{Special precautions for user}$ · Hazard identification number (Kemler code): 336 · EMS Number: F-E,S-D· Stowage Category · Stowage Code SW2 Clear of living quarters. · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Not applicable. · Transport/Additional information: $\cdot ADR$ · Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml \cdot IMDG 1L· Limited quantities (LQ) · Excepted quantities (EQ) Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml UN 1230 METHANOL, 3 (6.1), II · UN "Model Regulation":

15 Regulatory information

 $\cdot \textit{Safety, health and environmental regulations/legislation specific for the substance or \textit{mixture}}$

· Sara	
· Section 3.	13 (Specific toxic chemical listings):
67-56-1	methanol
56-23-5	carbon tetrachloride
67-66-3	chloroform
75-09-2	dichloromethane
75-25-2	bromoform
75-34-3	1,1-dichloroethane
75-35-4	1,1-dichloroethylene
78-87-5	propylene dichloride
79-00-5	1,1,2-trichloroethane
	trichloroethylene
79-34-5	1,1,2,2-tetrachloroethane
107-06-2	1,2-dichloroethane
108-90-7	chlorobenzene
127-18-4	tetrachloroethylene
· TSCA (To	oxic Substances Control Act):
All compo	onents have the value ACTIVE.
· Hazardou	us Air Pollutants
67-56-1	methanol
	carbon tetrachloride
67-66-3	chloroform
75-09-2	dichloromethane

(Contd. on page 9)

Product Name: Volatile Analyte Mix A

75-25-2 br	C	(Contd. of page
	1-dichloroethane	
	1-dichloroethylene	
	opylene dichloride	
	1,2-trichloroethane	
	chloroethylene	
	1,2,2-tetrachloroethane	
	2-dichloroethane	
	lorobenzene	
	trachloroethylene	
Proposition	65	
Chemicals k	nown to cause cancer:	
56-23-5 ca	rbon tetrachloride	
67-66-3 ch	loroform	
75-09-2 di	chloromethane	
75-25-2 br	omoform	
	1-dichloroethane	
	l-dichloroethylene	
	opylene dichloride	
	1,2-trichloroethane	
	chloroethylene	
	1,2,2-tetrachloroethane	
	2-dichloroethane	
	trachloroethylene	
	nown to cause reproductive toxicity for females: ingredients is listed.	
	hloroethylene nown to cause developmental toxicity:	
67-56-1 met		
67-66-3 chlo		
	oroform	
79-01-6 tric		
	hloroethylene	
Carcinogeni	hloroethylene c categories	
Carcinogeni EPA (Enviro	hloroethylene c categories onmental Protection Agency)	
Carcinogeni EPA (Enviro	hloroethylene c categories onmental Protection Agency) rbon tetrachloride	L
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch	hloroethylene c categories commental Protection Agency) rbon tetrachloride loroform	L B2, L, NL
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 did	hloroethylene c categories commental Protection Agency) rbon tetrachloride loroform chloromethane	
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 dia 75-25-2 br	hloroethylene c categories ommental Protection Agency) rbon tetrachloride loroform chloromethane omoform	B2, L, NL L B2
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-25-2 br 75-34-3 1,	hloroethylene c categories commental Protection Agency) crbon tetrachloride chloroform chloromethane comoform I-dichloroethane	B2, L, NL L B2 C
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 die 75-25-2 br 75-34-3 1, 75-35-4 1,	hloroethylene c categories commental Protection Agency) crbon tetrachloride cloroform chloromethane comoform 1-dichloroethane 1-dichloroethylene	B2, L, NL L B2 C
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 did 75-25-2 br 75-34-3 1, 79-00-5 1,	hloroethylene c categories commental Protection Agency) crbon tetrachloride cloroform chloromethane comoform 1-dichloroethane 1-dichloroethylene 1,2-trichloroethane	B2, L, NL L B2 C
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 did 75-25-2 br 75-34-3 1, 79-00-5 1,	hloroethylene c categories commental Protection Agency) crbon tetrachloride cloroform chloromethane comoform 1-dichloroethane 1-dichloroethylene	B2, L, NL L B2 C C, S (inh.), I (ord
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 did 75-25-2 br 75-34-3 1, 79-00-5 1, 79-01-6 tri	hloroethylene c categories commental Protection Agency) crbon tetrachloride cloroform chloromethane comoform 1-dichloroethane 1-dichloroethylene 1,2-trichloroethane	B2, L, NL L B2 C C, S (inh.), I (ord
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-25-2 br 75-34-3 1, 75-35-4 1, 79-00-5 1, 79-01-6 tri 79-34-5 1,	hloroethylene ic categories onmental Protection Agency) orbon tetrachloride oloroform ochloromethane omoform I-dichloroethane I-dichloroethylene I,2-trichloroethylene ichloroethylene	B2, L, NL L B2 C C, S (inh.), I (oracle) C CaH
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Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 dia 75-25-2 br 75-35-4 1, 79-00-5 1, 79-01-6 tri 79-34-5 1, 107-06-2 1, 108-90-7 ch	hloroethylene c categories onmental Protection Agency) orbon tetrachloride cloroform chloromethane omoform l-dichloroethane l-dichloroethylene l,2-trichloroethane chloroethylene l,2,2-tetrachloroethane 2-dichloroethane	B2, L, NL L B2 C C, S (inh.), I (ord C CaH L B2
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-25-2 br 75-34-3 1,, 79-00-5 1,, 79-01-6 tri 79-34-5 1, 107-06-2 1,, 108-90-7 ch 124-48-1 di	hloroethylene c categories commental Protection Agency) rrbon tetrachloride cloroform chloromethane comoform 1-dichloroethane 1-dichloroethylene 1,2-trichloroethane chloroethylene 1,2,2-tetrachloroethane 2-dichloroethane clorobenzene clorobenzene bromochloromethane	B2, L, NL L B2 C C, S (inh.), I (ora C CaH L B2 D
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Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-34-3 1, 75-35-4 1, 79-00-5 1, 79-01-6 tri 79-34-5 1, 107-06-2 1, 108-90-7 ch 124-48-1 di 127-18-4 tet 156-60-5 trc TLV (Thres) 56-23-5 ca	hloroethylene c categories commental Protection Agency) rrbon tetrachloride cloroform chloromethane chloroethane d-dichloroethane d-dichloroethylene d-z-trichloroethane chloroethylene d-z-trichloroethane d-z-dichloroethane chloroethylene d-z-dichloroethane clorobenzene chromochloromethane d-adichloroethylene d-adichloroethylene d-bromochloromethane crachloroethylene d-bromochloromethane crachloroethylene d-ams-dichloroethylene mus-dichloroethylene	B2, L, NL L B2 C C, S (inh.), I (ord C CaH L B2 D C L II
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-35-4 1, 79-00-5 1, 79-01-6 tri 79-34-5 1, 107-06-2 1, 108-90-7 ch 124-48-1 di 127-18-4 tet 156-60-5 trc TLV (Threst 56-23-5 ca 67-66-3 ch	hloroethylene ic categories onmental Protection Agency) rrbon tetrachloride loroform chloromethane omoform I-dichloroethane I-dichloroethylene I,2-trichloroethane ichloroethylene I,2,2-tetrachloroethane 2-dichloroethane lorobenzene bromochloromethane trachloroethylene ms-dichloroethylene ms-dichloroethylene mold Limit Value established by ACGIH) rrbon tetrachloride loroform	B2, L, NL L B2 C C, S (inh.), I (ord C CaH L B2 D C L II
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-25-2 br 75-34-3 1, 79-00-5 1, 79-01-6 tri 79-34-5 1, 107-06-2 1, 108-90-7 ch 124-48-1 di 127-18-4 tet 156-60-5 tra TLV (Threst 56-23-5 ca 67-66-3 ch 75-09-2 di	hloroethylene c categories commental Protection Agency) crbon tetrachloride cloroform chloromethane comoform d-dichloroethane d-dichloroethylene d-z-trichloroethane chloroethylene d-z-trichloroethane d-z-trichloroethane clorobenzene clorobenzene clorobenzene chromochloromethane drachloroethylene	B2, L, NL L B2 C C, S (inh.), I (ord C CaH L B2 D C L II
Carcinogeni EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 did 75-25-2 br 75-35-4 1, 79-00-5 1, 79-01-6 tri 79-34-5 1, 107-06-2 1, 108-90-7 ch 124-48-1 did 127-18-4 tet 156-60-5 tra TLV (Thresh 56-23-5 ca 67-66-3 ch 75-09-2 did 75-25-2 br	hloroethylene c categories onmental Protection Agency) orbon tetrachloride cloroform chloromethane omoform l-dichloroethane l-dichloroethylene l,2-trichloroethane ichloroethylene l,2,2-tetrachloroethane elorobenzene bromochloromethane trachloroethylene mus-dichloroethylene trachloroethylene	B2, L, NL L B2 C C, S (inh.), I (ore C CaH L B2 D C L II
Carcinogenia EPA (Enviro 56-23-5 ca 67-66-3 ch 75-09-2 di 75-25-2 br 75-34-3 1, 79-00-5 1,. 79-01-6 tri 79-34-5 1,. 107-06-2 1,. 108-90-7 ch 124-48-1 di 127-18-4 tet 156-60-5 tra TLV (Threst 56-23-5 ca 67-66-3 ch 75-09-2 di 75-25-2 br	hloroethylene c categories commental Protection Agency) crbon tetrachloride cloroform chloromethane comoform d-dichloroethane d-dichloroethylene d-z-trichloroethane chloroethylene d-z-trichloroethane d-z-trichloroethane clorobenzene clorobenzene clorobenzene chromochloromethane drachloroethylene	B2, L, NL L B2 C C, S (inh.), I (ord C CaH L B2 D C L II

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Volatile Analyte Mix A

(Contd. of page 9) 78-87-5 propylene dichloride A479-00-5 1,1,2-trichloroethane A379-01-6 trichloroethylene A279-34-5 1.1.2.2-tetrachloroethane A3107-06-2 1,2-dichloroethane A4108-90-7 chlorobenzene А3 127-18-4 tetrachloroethylene А3 · NIOSH-Ca (National Institute for Occupational Safety and Health) 56-23-5 carbon tetrachloride 67-66-3 chloroform 75-09-2 dichloromethane 78-87-5 propylene dichloride 79-00-5 1,1,2-trichloroethane 79-01-6 trichloroethylene 79-34-5 1,1,2,2-tetrachloroethane 107-06-2 1,2-dichloroethane 127-18-4 tetrachloroethylene

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P210

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

(Contd. on page 11)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Volatile Analyte Mix A

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vpvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
REL: Recommended Exposure Limit
FEI: Biological Exposure Limit
FIam. Liq. 2: Flammable liquids — Category 2
Acute Tox. 3: Acute toxicity — Category 3
STOT SE 1: Specific target organ toxicity (single exposure) — Category 1

(Contd. of page 10)

1 Identification

- · Product identifier
- · Product Name: METHYL SALICYLATE
- · Part Name: NEAT-2458
- CAS Number: 119-36-8
- EC number: 204-317-7
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen, NJ 08840 USA
- · Information department: product safety department
- Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)

Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



Acute Tox. 4 H302 Harmful if swallowed.

Eye Irrit. 2A H319 Causes serious eye irritation.

- · Label elements
- · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms



GHS07

- · Signal word Warning
- · Hazard-determining components of labeling:

methyl salicylate

· Hazard statements

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

· Precautionary statements

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear eye protection / face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2 Fire = 1Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 2 Fire = 1Reactivity = 0

(Contd. on page 2)

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: METHYL SALICYLATE

· Other hazards

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description

119-36-8 methyl salicylate

- · Identification number(s)
- · EC number: 204-317-7

4 First-aid measures

- · Description of first aid measures
- General information: Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing:

Immediately call a doctor.

Do not give anything to eat or drink - Do not induce vomitting

- · Information for Doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- $\cdot \textit{Personal precautions, protective equipment and emergency procedures} \ \textit{Not required}.$
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- $\cdot \textit{Methods and material for containment and cleaning up:}$

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

• PAC-1: 2.3 ppm

· PAC-2:

25 ppm

· PAC-3:

150 ppm

7 Handling and storage

- · Handling
- · Precautions for safe handling No special precautions are necessary if used correctly.
- Information about protection against explosions and fires: No special measures required.
- $\cdot \textit{Conditions for safe storage, including any incompatibilities}$
- · Storage
- · Requirements to be met by storerooms and receptacles: No special requirements.

(Contd. on page 3)

Product Name: METHYL SALICYLATE

(Contd. of page 2)

- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- · Respiratory protection: Not required.
- · Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Not applicable.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

 \cdot Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information

· Appearance:

· pH-value:

Form: Oily
Color: Colorless
Odor: Aromatic
Odour Threshold: Not applicable.

· Change in condition

Melting point/Melting range: $-8 \, ^{\circ}C \, (17.6 \, ^{\circ}F)$ Boiling point/Boiling range: $223 \, ^{\circ}C \, (433.4 \, ^{\circ}F)$ Clash point: $101 \, ^{\circ}C \, (213.8 \, ^{\circ}F)$

• Flash point: 101 °C (213.8 °I • Flammability (solid, gaseous): Not applicable.

• Ignition temperature: 450 °C (842 °F)

• Decomposition temperature: Not applicable.

· Auto igniting: Not determined.

(Contd. on page 4)

Product Name: METHYL SALICYLATE

		(Contd. of page 3)
· Danger of explosion:	Product does not present an explosion hazard.	
· Explosion limits:		
Lower:	Not applicable.	
Upper:	Not applicable.	
· Vapor pressure at 20 °C (68 °F):	0.13 hPa (0.1 mm Hg)	
· Density at 20 °C (68 °F)	1.18 g/cm³ (9.8471 lbs/gal)	
· Relative density	Not applicable.	
· Vapor density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water at 30 °C (86 °F):	0.7 g/l	
· Partition coefficient (n-octanol/wate	r): Not applicable.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
VOC content:	0.00 %	
Solids content:	0.0 %	
· Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- $\cdot \textbf{Incompatible materials:} \ No \ further \ relevant \ information \ available.$
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

119-36-8 methyl salicylate

Oral LD50 887 mg/kg (rat)

- · Primary irritant effect:
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- $\cdot \textit{Bioaccumulative potential No further relevant information available}.$
- · Mobility in soil No further relevant information available.

(Contd. on page 5)

Product Name: METHYL SALICYLATE

(Contd. of page 4)

- $\cdot Additional\ ecological\ information:$
- · General notes:

Water hazard class 1 (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

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· UN-Number	
\cdot DOT	UN3082
· ADR. IMDG. IATA	Not Regulated

- · UN proper shipping name
- $\cdot DOT$

Environmentally hazardous substance, liquid, n.o.s. (methyl salicylate) · ADR, IMDG, IATA Not Regulated

- · Transport hazard class(es)
- $\cdot DOT$



· Class	9 Miscellaneous dangerous substances and articles
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· Label

· ADR, ADN, IMDG, IATA Not Regulated

· Class

· Packing group $\cdot DOT$

· ADR, IMDG, IATA Not Regulated

· Environmental hazards: Not applicable. · Marine pollutant: Yes (DOT)

· Special precautions for user Not applicable.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC

Not applicable.

· Transport/Additional information:

 $\cdot DOT$

Special marking with the symbol (fish and tree). · Remarks:

· UN "Model Regulation": Not Regulated

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

ACTIVE

· Hazardous Air Pollutants

Substance is not listed.

(Contd. on page 6)

Product Name: METHYL SALICYLATE

· Proposition 65

(Contd. of page 5)

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms



- · Signal word Warning
- · Hazard-determining components of labeling:

methyl salicylate

· Hazard statements

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

· Precautionary statements

Wash thoroughly after handling. P264

P270 Do not eat, drink or smoke when using this product.

P280 Wear eye protection / face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

Dispose of contents/container in accordance with local/regional/national/international regulations. P501

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value

(Contd. on page 7)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: METHYL SALICYLATE

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Tox. 4: Acute toxicity – Category 4 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

(Contd. of page 6)

1 Identification

- · Product identifier
- · Product Name: GASOLINE RANGE ORGANICS
- · Part Name: GRO-1000
- $\cdot \textbf{\textit{Application of the substance / the mixture}} \ \textit{Certified Reference Material}$
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)

Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS08

GHS02

· Signal word Danger

· Hazard-determining components of labeling:

methanol

benzene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

(Contd. on page 2)

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: GASOLINE RANGE ORGANICS

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1

REACTIVITY 0

Fire = 3Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
67-56-1	methanol	99.1%
71-43-2	benzene	0.1%
	naphthalene	0.1%
100-41-4	ethylbenzene	0.1%
108-88-3	toluene	0.1%

108-88-3	toluene	0.1%
· Chemical	identification of the substance/preparation	
1	o-xylene	0.1%
1	1,2,4-trimethylbenzene	0.1%
	3-methylpentane	0.1%
108-38-3		0.1%
540-84-1	2,2,4-trimethylpentane	0.1%

4 First-aid measures

- · Description of first aid measures
- $\cdot \textit{General information:}$

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

US

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 2)

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

• PAC-1:			
67-56-1	methanol	530 ppm	
71-43-2	benzene		
91-20-3	naphthalene	15 ppm	
95-63-6	1,2,4-trimethylbenzene	140 ppm	
	3-methylpentane	1,000 ppm	
100-41-4	ethylbenzene	33 ppm	
	m-xylene	130 ppm	
108-88-3	toluene	67 ppm	
540-84-1	2,2,4-trimethylpentane	230 ppm	
· PAC-2:			
67-56-1	methanol 2	2,100 ppm	
71-43-2	benzene 8	300 ppm	
91-20-3	naphthalene 8	83 ppm	
95-63-6	1,2,4-trimethylbenzene 3	360 ppm	
96-14-0	3-methylpentane	11000** ppm	
100-41-4	ethylbenzene 1	1100* ppm	
108-38-3		920 ppm	
108-88-3		560 ppm	
540-84-1	2,2,4-trimethylpentane		
· PAC-3:			
67-56-1		200* ppm	
71-43-2	benzene 40	4000* ppm	
91-20-3	naphthalene 50	500 ppm	
95-63-6	1,2,4-trimethylbenzene 48	480 ppm	
	* *	66000*** ppi	
		800* ppm	
108-38-3	m-xylene 25	500* ppm	
108-88-3		700* ppm	
540-84-1	2,2,4-trimethylpentane 50	000* ppm	

(Contd. on page 4)

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 3)

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

- PEL Long-term value: 260 mg/m³, 200 ppm
- REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

TLV Short-term value: 328 mg/m³, 250 ppm

Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

71-43-2 benzene

PEL Short-term value: 15* mg/m³, 5* ppm

Long-term value: 3* mg/m³, 1* ppm

*table Z-2 for exclusions in 29CFR1910.1028(d)

REL Short-term value: 1 ppm

Long-term value: 0.1 ppm

See Pocket Guide App. A

Short-term value: 8 mg/m³, 2.5 ppm

Long-term value: 1.6 mg/m³, 0.5 ppm Skin; BEI

91-20-3 naphthalene

PEL Long-term value: 50 mg/m³, 10 ppm

REL Short-term value: 75 mg/m³, 15 ppm

Long-term value: 50 mg/m³, 10 ppm

TLV Long-term value: 52 mg/m³, 10 ppm

Skin; BEI

100-41-4 ethylbenzene

PEL Long-term value: 435 mg/m³, 100 ppm

REL Short-term value: 545 mg/m³, 125 ppm

Long-term value: 435 mg/m³, 100 ppm

TLV Long-term value: 87 mg/m³, 20 ppm BEI

108-88-3 toluene

PEL Long-term value: 200 ppm

Ceiling limit value: 300; 500* ppm

*10-min peak per 8-hr shift

REL Short-term value: 560 mg/m³, 150 ppm

Long-term value: 375 mg/m³, 100 ppm

(Contd. on page 5)

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 4)

TLV Long-term value: 75 mg/m³, 20 ppm

BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

71-43-2 benzene

BEI 25 μg/g creatinine

Medium: urine

Time: end of shift Parameter

Parameter: S-Phenylmercapturic acid (background

500 μg/g creatinine Medium: urine Time: end of shift

Parameter: t,t-Muconic acid (background)

100-41-4 ethylbenzene

BEI 0.7 g/g creatinine

Medium: urine

Time: end of shift at end of workweek

Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)

Medium: end-exhaled air Time: not critical

Parameter: Ethyl benzene (semi-quantitative)

108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

- · Additional information: The lists that were valid during the creation were used as basis.
- $\cdot \textit{Exposure controls}$
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 6)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 5)

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Liquid

Color: According to product specification

· Odor: Characteristic · Odour Threshold: Not applicable. · pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined. 64.7 °C (148.5 °F) Boiling point/Boiling range: · Flash point: < 23 °C (< 73.4 °F)

· Flammability (solid, gaseous): Not applicable.

455 °C (851 °F) · Ignition temperature: · Decomposition temperature: Not applicable.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

5.5 Vol % Lower: 44 Vol % Upper:

128 hPa (96 mm Hg) · Vapor pressure at 20 °C (68 °F):

· Density at 20 °C (68 °F) 0.79062 g/cm3 (6.59772 lbs/gal)

· Relative density Not applicable. · Vapor density Not applicable. Not applicable. · Evaporation rate

· Solubility in / Miscibility with

Fully miscible.

· Partition coefficient (n-octanol/water): Not applicable.

· Viscosity:

Not applicable. Dynamic: Kinematic: Not applicable. · Solvent content:

99.8 % Organic solvents: **VOC** content: 99.80 % Solids content:

· Other information No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.

(Contd. on page 7)

Product Name: GASOLINE RANGE ORGANICS

· Hazardous decomposition products: No dangerous decomposition products known.

(Contd. of page 6)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50	· LD/LC50 values that are relevant for classification:		
67-56-1 m	67-56-1 methanol		
Oral	LD50	5,628 mg/kg (rat)	
Dermal	Dermal LD50 15,800 mg/kg (rabbit)		
71-43-2 be	71-43-2 benzene		
Oral		4,894 mg/kg (rat)	
Dermal	Dermal LD50 48 mg/kg (mouse)		
Inhalative	Inhalative LC50/4 h 9,980 mg/l (mouse)		

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

The product can cause inheritable damage.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)	
71-43-2 benzene	1
91-20-3 naphthalene	2E
95-47-6 o-xylene	3
100-41-4 ethylbenzene	2E
108-38-3 m-xylene	3
108-88-3 toluene	3
· NTP (National Toxicology Program)	
71-43-2 benzene	K
91-20-3 naphthalene	R
· OSHA-Ca (Occupational Safety & Health Administration)	
71-43-2 benzene	

12 Ecological information

- · Toxicity
- $\cdot \textbf{\textit{Aquatic toxicity:}} \ \textit{No further relevant information available}.$
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- . Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 8)

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 7)

- Uncleaned packagings:
 Recommendation: Disposal must be made according to official regulations.
 Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number DOT, ADR, IMDG, IATA	UN1230
UN proper shipping name	
DOT	Methanol
ADR	1230 METHANOL
IMDG, IATA	METHANOL
Transport hazard class(es)	
DOT AMMAIL TOD TOXIC	
Class	3 Flammable liquids
Label	3, 6.1
	u, v
ADR	
Class	3 Flammable liquids
Label	3+6.1
IMDG	
Class Label	3 Flammable liquids 3/6.1
IATA S S S S S S S S S S S S S S S S S S	
Class	3 Flammable liquids
Label	3 (6.1)
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user Hazard identification number (Kemler code):	Warning: Flammable liquids 336
Huzara mentification number (Kemter code): EMS Number:	530 F-E,S-D
Stowage Category	В
Stowage Code	SW2 Clear of living quarters.

(Contd. on page 9)

Product Name: GASOLINE RANGE ORGANICS

95-63-6 1,2,4-trimethylbenzene

Contd. of page 8)

Transport/Additional information:

ADR

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

IMDG

Limited quantities (LQ)

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information · Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara · Section 313 (Specific toxic chemical listings): 67-56-1 methanol 71-43-2 benzene 91-20-3 naphthalene 95-47-6 o-xylene 95-63-6 1,2,4-trimethylbenzene 100-41-4 ethylbenzene 108-38-3 m-xylene 108-88-3 toluene · TSCA (Toxic Substances Control Act): All components have the value ACTIVE. · Hazardous Air Pollutants 67-56-1 methanol 71-43-2 benzene 91-20-3 naphthalene 95-47-6 o-xylene 100-41-4 ethylbenzene 108-38-3 m-xylene 108-88-3 toluene 540-84-1 2,2,4-trimethylpentane · Proposition 65 · Chemicals known to cause cancer: 71-43-2 benzene 91-20-3 naphthalene 100-41-4 ethylbenzene · Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed. · Chemicals known to cause reproductive toxicity for males: 71-43-2 benzene · Chemicals known to cause developmental toxicity: 67-56-1 methanol 71-43-2 benzene 108-88-3 toluene · Carcinogenic categories · EPA (Environmental Protection Agency) 71-43-2 benzene A, K/L 91-20-3 naphthalene C, CBD 95-47-6 o-xylene

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 9) 100-41-4 ethylbenzene D 108-38-3 m-xylene 108-88-3 toluene II 540-84-1 2,2,4-trimethylpentane II · TLV (Threshold Limit Value established by ACGIH) 71-43-2 benzene A191-20-3 naphthalene A495-47-6 o-xylene A4100-41-4 ethylbenzene A3A4 108-38-3 m-xylene 108-88-3 toluene A4· NIOSH-Ca (National Institute for Occupational Safety and Health) 71-43-2 benzene

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

benzene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · National regulations:
- $\cdot \textit{Information about limitation of use:}$

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

· Date of preparation / last revision 11/06/2020 / -

(Contd. on page 11)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: GASOLINE RANGE ORGANICS

(Contd. of page 10)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit BEI: Biological Exposure Limit

BEI: Biological exposure Limit
Flam. Liq. 2: Flammable liquids — Category 2
Acute Tox. 3: Acute toxicity — Category 3
Muta. 1B: Germ cell mutagenicity — Category 1B
Carc. 1A: Carcinogenicity — Category 1A
Repr. 2: Reproductive toxicity — Category 2
STOT SE 1: Specific target organ toxicity (single exposure) — Category 1

1 Identification

- · Product identifier
- · Product Name: TOLUENE
- · Part Name: NEAT-3505
- · CAS Number:

108-88-3

- · EC number:
- 203-625-9
- · Index number:

601-021-00-3

- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- · Label elements
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS07

· Signal word Danger

· Hazard-determining components of labeling:

toluene

· Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H361 Suspected of damaging fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

(Contd. on page 2)

(Contd. of page 1)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: TOLUENE

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P331 Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a poison center/doctor if you feel unwell.

P362+P364 Take off contaminated clothing and wash it before reuse.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 1 Fire = 3Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Substances

· CAS No. Description 108-88-3 toluene

· Identification number(s) · EC number: 203-625-9

· Index number: 601-021-00-3

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact: Immediately rinse with water.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · For safety reasons unsuitable extinguishing agents: Water with full jet
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

Product Name: TOLUENE

(Contd. of page 2)

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:

67 ppm

· PAC-2:

560 ppm

· PAC-3:

3700* ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- $\cdot \textbf{\textit{Additional information about design of technical systems:} \ \textit{No further data; see item 7.} \\$
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

108-88-3 toluene

PEL Long-term value: 200 ppm

Ceiling limit value: 300; 500* ppm

*10-min peak per 8-hr shift

REL Short-term value: 560 mg/m³, 150 ppm

Long-term value: 375 mg/m³, 100 ppm

TLV Long-term value: 75 mg/m³, 20 ppm

BEÏ

(Contd. on page 4)

Product Name: TOLUENE

(Contd. of page 3)

· Ingredients with biological limit values:

108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information

Appearance:
Form: Liquid
Color: Colorless
Odor: Aromatic
Odour Threshold: Not applicable.

· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: -95 °C (-139 °F)

Boiling point/Boiling range: 110-111 °C (230-167.8 °F)

(Contd. on page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: TOLUENE

		(Contd. of page 4)
· Flash point:	4 °C (39.2 °F)	
· Flammability (solid, gaseous):	Not applicable.	
· Ignition temperature:	535 °C (995 °F)	
· Decomposition temperature:	Not applicable.	
· Auto igniting:	Not determined.	
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.	
· Explosion limits: Lower: Upper:	1.2 Vol % 7 Vol %	
· Vapor pressure at 20 °C (68 °F):	29 hPa (21.8 mm Hg)	
 Density at 20 °C (68 °F) Relative density Vapor density Evaporation rate 	0.87 g/cm³ (7.26015 lbs/gal) Not applicable. Not applicable. Not applicable.	
Solubility in / Miscibility with Water at 15 °C (59 °F):	0.5 g/l	
· Partition coefficient (n-octanol/wate	r): Not applicable.	
· Viscosity: Dynamic at 20 °C (68 °F): Kinematic: Organic solvents: VOC content:	0.6 mPas Not applicable. 100.0 % 100.00 %	
Solids content: Other information	0.0 % No further relevant information available.	

10 Stability and reactivity

- $\cdot \textit{Reactivity No further relevant information available}.$
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- $\cdot \textit{Possibility of hazardous reactions} \ \textit{No dangerous reactions known}.$
- · Conditions to avoid No further relevant information available.
- $\cdot \textbf{Incompatible materials:} \ No \ further \ relevant \ information \ available.$
- $\cdot \textit{Hazardous decomposition products:} \ \textit{No dangerous decomposition products known.}$

11 Toxicological information

- · Information on toxicological effects
- $\cdot \textit{Acute toxicity:}$

· LD/LC30 1	· LD/LC30 values that are relevant for classification:		
108-88-3 toluene			
Oral	LD50	5,000 mg/kg (rat)	
Dermal	LD50	12,124 mg/kg (rabbit)	
Inhalative	LC50/4 h	5,320 mg/l (mouse)	

- · Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

· NTP (National Toxicology Program)

Substance is not listed.

(Contd. on page 6)

3

Product Name: TOLUENE

(Contd. of page 5)

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 2 (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

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14 Tran	sport in	torma	tıon

	UN-Number
•	UIV-IVUIIIUEI

· DOT, ADR, IMDG, IATA UN1294

· UN proper shipping name

 $\cdot DOT$

 \cdot ADR

 $\cdot \textit{IMDG}, \textit{IATA}$

1294 TOLUENE

TOLUENE

- · Transport hazard class(es)
- $\cdot DOT$



· Class
 · Label
 3 Flammable liquids
 3

0el ------

· ADR, IMDG, IATA



· Class 3 Flammable liquids

· Label

· Packing group

· DOT, ADR, IMDG, IATA

· Environmental hazards: Not applicable.

· Special precautions for user Warning: Flammable liquids

· Hazard identification number (Kemler code): 33

· EMS Number: F-E,S-D

(Contd. on page 7)

Product Name: TOLUENE

	(Contd. of page
· Stowage Category	В
Transport in bulk according to Annex II of MARPO	
Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN ''Model Regulation'':	UN 1294 TOLUENE, 3, II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara

· Section 313 (Specific toxic chemical listings):

Substance is listed.

· TSCA (Toxic Substances Control Act):

ACTIVE

· Hazardous Air Pollutants

Substance is listed.

- · Proposition 65
- · Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

II

· TLV (Threshold Limit Value established by ACGIH)

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

- · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS07

GHS08

- · Signal word Danger
- $\cdot \textit{Hazard-determining components of labeling:}$

toluene

· Hazard statements

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H361 Suspected of damaging fertility or the unborn child.

H336 May cause drowsiness or dizziness.

H373 May cause damage to organs through prolonged or repeated exposure.

(Contd. on page 8)

(Contd. of page 7)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: TOLUENE

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

Do not breathe dust/fume/gas/mist/vapors/spray. P260

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label). P321

Do NOT induce vomiting. P331

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a poison center/doctor if you feel unwell.

P362+P364 Take off contaminated clothing and wash it before reuse. P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

· Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

· Date of preparation / last revision 11/06/2020 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2 Skin Irrit. 2: Skin corrosion/irritation – Category 2

Repr. 2: Reproductive toxicity - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Asp. Tox. 1: Aspiration hazard - Category 1

1 Identification

- · Product identifier
- · Product Name: Custom Organic Standard-Unleaded Gasoline
- · Part Name: NEAT-3873
- · CAS Number:

86290-81-5

- **EC number:** 289-220-8
- · Index number:

649-378-00-4

- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300)
Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1B H350 May cause cancer.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

- · Label elements
- · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms



GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

Gasoline

· Hazard statements

H340 May cause genetic defects.

H350 May cause cancer.

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P331 Do NOT induce vomiting.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 0 Fire = 0Reactivity = 0

(Contd. on page 2)

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Custom Organic Standard-Unleaded Gasoline

· HMIS-ratings (scale 0 - 4)

HEALTH *0 Health = *0 Fire = 0 REACTIVITY $\boxed{0}$

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description 86290-81-5 Gasoline · Identification number(s) · EC number: 289-220-8
- · Index number: 649-378-00-4

4 First-aid measures

- · Description of first aid measures
- $\cdot \textit{After inhalation: } \textit{Supply fresh air; consult doctor in case of complaints.}$
- · After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

· PAC-3:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Protective Action Criteria for Chemicals

Trocetty e Henon Criteria yor Chemicans	
· PAC-1:	
	200 ppm
· PAC-2:	
	1,000 ppm

4000* ppm

Product Name: Custom Organic Standard-Unleaded Gasoline

(Contd. of page 2)

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

- Information about protection against explosions and fires: Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- \cdot Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

86290-81-5 Gasoline

REL See Pocket Guide App. A

TLV Short-term value: 1480 mg/m³, 500 ppm Long-term value: 890 mg/m³, 300 ppm

bulk handling

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

 $Store\ protective\ clothing\ separately.$

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

Product Name: Custom Organic Standard-Unleaded Gasoline

(Contd. of page 3)

9 Physical and chemical propertie	S
· Information on basic physical and c	chemical properties
· General Information	
· Appearance:	
Form:	Liquid
Color:	Not determined.
· Odor:	Characteristic
· Odour Threshold:	Not applicable.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not applicable.
· Auto igniting:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not applicable.
Upper:	Not applicable.
· Vapor pressure:	Not determined.
· Density	Not applicable.
· Relative density	Not applicable.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	er): Not applicable.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
VOC content:	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- $\cdot \textit{Reactivity} \ \textit{No further relevant information available}.$
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the eye: No irritating effect.
- $\cdot \textbf{\textit{Sensitization:}} \ \textit{No sensitizing effects known.}$
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

2B

Product Name: Custom Organic Standard-Unleaded Gasoline

(Contd. of page 4)

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Assessment by list): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

	^f ormat	

· UN-Number

· DOT, ADR, IMDG, IATA Not Regulated

· UN proper shipping name

· DOT, ADR, IMDG, IATA Not Regulated

· Transport hazard class(es)

· DOT, ADR, ADN, IMDG, IATA

· Class Not Regulated

· Packing group

· DOT, ADR, IMDG, IATA

Not Regulated

· Environmental hazards: Not applicable.

· Special precautions for user Not applicable.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC

Code Not applicable.

· UN "Model Regulation": Not Regulated

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 313 (Specific toxic chemical listings):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is not listed.

(Contd. on page 6)

Product Name: Custom Organic Standard-Unleaded Gasoline

(Contd. of page 5)

· Hazardous Air Pollutants

Substance is not listed.

Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is listed.

- · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms



- · Signal word Danger
- · Hazard-determining components of labeling:

Gasoline

· Hazard statements

H340 May cause genetic defects.

H350 May cause cancer.

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

Obtain special instructions before use. P201

P202 Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. P280

P301+P310 If swallowed: Immediately call a poison center/doctor.

Do NOT induce vomiting. P331

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations. P501

- · National regulations:
- · Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

(Contd. on page 7)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Custom Organic Standard-Unleaded Gasoline

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

HMIS: Hazardous Materials Identification System (VOC: Volatile Organic Compounds (USA, EU) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Muta. 1B: Germ cell mutagenicity – Category 1B Carc. 1B: Carcinogenicity – Category 1 Asp. Tox. 1: Aspiration hazard – Category 1

(Contd. of page 6)

1 Identification

- · Product identifier
- Product Name: Purgeable Aromatics for Gasoline Identification
- · Part Name: P-GAS
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300)

Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS08

- · Signal word Danger
- $\cdot \textit{Hazard-determining components of labeling:}$

methanol

benzene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

(Contd. on page 2)

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: Purgeable Aromatics for Gasoline Identification

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1Fire = 3

Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

Ü	components:	
67-56-1	methanol	97.8%
71-43-2		0.2%
	ethylbenzene	0.2%
106-46-7	1,4-dichlorobenzene	0.2%
108-88-3		0.2%
1634-04-4	Methyl-tert-butyl ether	0.2%
· Chemical i	lentification of the substance/preparation	

	and the first carry care.	0.2 /0
· Chemical	identification of the substance/preparation	
	o-xylene	0.2%
	1,2-dichlorobenzene	0.2%
106-42-3		0.2%
108-38-3	·	0.2%
	chlorobenzene	0.2%
541-73-1	1,3-dichlorobenzene	0.2%

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

(Contd. on page 3)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: Purgeable Aromatics for Gasoline Identification

(Contd. of page 2)

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

PAC-1:		
67-56-1	methanol	530 ppn
	benzene	52 ppm
	1,2-dichlorobenzene	50 ppm
100-41-4	ethylbenzene	33 ppm
106-46-7	1,4-dichlorobenzene	30 ppm
108-38-3	m-xylene	130 ррг
108-88-3	toluene	67 ppm
108-90-7	chlorobenzene	10 ppm
541-73-1	1,3-dichlorobenzene	6 ррт
1634-04-4	Methyl-tert-butyl ether	50 ppm
PAC-2:		-
67-56-1	methanol .	2,100 ppn
71-43-2	benzene	800 ppm
95-50-1	1,2-dichlorobenzene	170 ppm
100-41-4	ethylbenzene	1100* pp
106-46-7	1,4-dichlorobenzene	170 ppm
108-38-3	m-xylene	920 ppm
108-88-3		560 ppm
108-90-7	chlorobenzene	150 ppm
541-73-1		66 ppm
1634-04-4	Methyl-tert-butyl ether	570 ppm
PAC-3:		
67-56-1	methanol	7200* pp
71-43-2	benzene	4000* pp
95-50-1	1,2-dichlorobenzene	1,000 ppn
100-41-4	ethylbenzene	1800* pp
106-46-7		1,000 ррі
108-38-3	m-xylene	2500* pp
108-88-3	toluene	3700* pp
108-90-7	chlorobenzene	400 ppm
541-73-1	1,3-dichlorobenzene	400 ppm

Product Name: Purgeable Aromatics for Gasoline Identification

1634-04-4 Methyl-tert-butyl ether

(Contd. of page 3) 5300* ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

- Store in cool, dry conditions in well sealed receptacles.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

- PEL Long-term value: 260 mg/m³, 200 ppm
- Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm

TLV Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

71-43-2 benzene

- PEL Short-term value: 15* mg/m³, 5* ppm
 - Long-term value: 3* mg/m³, 1* ppm

*table Z-2 for exclusions in 29CFR1910.1028(d)

REL Short-term value: 1 ppm

Long-term value: 0.1 ppm

See Pocket Guide App. A

TLV Short-term value: 8 mg/m³, 2.5 ppm

Long-term value: 1.6 mg/m³, 0.5 ppm

Skin; BEI

100-41-4 ethylbenzene

- PEL Long-term value: 435 mg/m³, 100 ppm
- REL Short-term value: 545 mg/m³, 125 ppm
 - Long-term value: 435 mg/m³, 100 ppm

TLV Long-term value: 87 mg/m³, 20 ppm

BEI

106-46-7 1,4-dichlorobenzene

- PEL Long-term value: 450 mg/m³, 75 ppm
- REL See Pocket Guide App. A
- TLV Long-term value: 60 mg/m³, 10 ppm

108-88-3 toluene

PEL Long-term value: 200 ppm

Ceiling limit value: 300; 500* ppm

*10-min peak per 8-hr shift

(Contd. on page 5)

Product Name: Purgeable Aromatics for Gasoline Identification

(Contd. of page 4)

REL Short-term value: 560 mg/m³, 150 ppm

Long-term value: 375 mg/m³, 100 ppm

TLV Long-term value: 75 mg/m³, 20 ppm

BEI

1634-04-4 Methyl-tert-butyl ether

TLV Long-term value: 180 mg/m³, 50 ppm

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

71-43-2 benzene

BEI 25 μg/g creatinine

Medium: urine

Time: end of shift Parameter

Parameter: S-Phenylmercapturic acid (background

500 µg/g creatinine Medium: urine Time: end of shift

Parameter: t,t-Muconic acid (background)

100-41-4 ethylbenzene

BEI 0.7 g/g creatinine

Medium: urine

Time: end of shift at end of workweek

Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative)

-

Medium: end-exhaled air Time: not critical

Parameter: Ethyl benzene (semi-quantitative)

108-88-3 toluene

BEI 0.02 mg/L

Medium: blood

Time: prior to last shift of workweek

Parameter: Toluene

0.03 mg/L Medium: urine Time: end of shift Parameter: Toluene

0.3 mg/g creatinine Medium: urine Time: end of shift

Parameter: o-Cresol with hydrolysis (background)

- · Additional information: The lists that were valid during the creation were used as basis.
- $\cdot \textit{Exposure controls}$
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

(Contd. on page 6)

Product Name: Purgeable Aromatics for Gasoline Identification

(Contd. of page 5)

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:



Tightly sealed goggles

9 Physical and chemical properties • Information on basic physical and chemical properties

· Information on basic physical and c · General Information	nemical properties
· Appearance:	
Form:	Liquid
Color:	According to product specification
· Odor:	Characteristic
· Odour Threshold:	Not applicable.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	64.7 °C (148.5 °F)
· Flash point:	< 23 °C (< 73.4 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	455 °C (851 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	5.5 Vol %
Upper:	44 Vol %
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Density at 20 °C (68 °F)	0.79489 g/cm³ (6.63336 lbs/gal)
· Relative density	Not applicable.
· Vapor density	Not applicable.
Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	er): Not applicable.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.

10 Stability and reactivity

- $\cdot \textit{Reactivity No further relevant information available}.$
- · Chemical stability

· Solvent content:

Organic solvents: VOC content:

Solids content:

Other information

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

No further relevant information available.

99.4 %

99.40 %

0.2 %

(Contd. on page 7)

Product Name: Purgeable Aromatics for Gasoline Identification

(Contd. of page 6)

- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50	values that	are relevant for classification:		
67-56-1 m	ethanol			
Oral	LD50	5,628 mg/kg (rat)		
Dermal	LD50	15,800 mg/kg (rabbit)		
71-43-2 be	nzene			
Oral	Oral LD50 4,894 mg/kg (rat)			
Dermal	Dermal LD50 48 mg/kg (mouse)			
Inhalative	LC50/4 h	9,980 mg/l (mouse)		
95-50-1 1,.	2-dichloro	benzene		
Oral	LD50	500 mg/kg (rat)		
106-46-7 1	,4-dichlor	obenzene		
Oral	LD50	500 mg/kg (rat)		

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

The product can cause inheritable damage.

· Carcinogenic categories

· IARC (Inte	ernational Agency for Research on Cancer)	
71-43-2	benzene	1
95-47-6	o-xylene	3
95-50-1	1,2-dichlorobenzene	3
100-41-4	ethylbenzene	2B
106-42-3	p-xylene	3
106-46-7	1,4-dichlorobenzene	2B
108-38-3	m-xylene	3
108-88-3	toluene	3
541-73-1	1,3-dichlorobenzene	3
1634-04-4	Methyl-tert-butyl ether	3
· NTP (Natio	onal Toxicology Program)	
71-43-2 l	penzene	K
106-46-7	1,4-dichlorobenzene	R
· OSHA-Ca	(Occupational Safety & Health Administration)	
71-43-2 be	enzene	

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- $\cdot \textit{Bioaccumulative potential No further relevant information available}.$
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

 $Do \ not \ allow \ product \ to \ reach \ ground \ water, \ water \ course \ or \ sewage \ system, \ even \ in \ small \ quantities.$

(Contd. on page 8)

Product Name: Purgeable Aromatics for Gasoline Identification

(Contd. of page 7)

- Danger to drinking water if even extremely small quantities leak into the ground.
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information	
· UN-Number · DOT, ADR, IMDG, IATA	UN1230
· UN proper shipping name · DOT · ADR · IMDG, IATA	Methanol 1230 METHANOL METHANOL
· Transport hazard class(es)	
· DOT	
TOXIC TOXIC	
· Class · Label	3 Flammable liquids 3, 6.1
· ADR	
· Class · Label	3 Flammable liquids 3+6.1
· IMDG	
· Class · Label	3 Flammable liquids 3/6.1
·IATA	
· Class · Label	3 Flammable liquids 3 (6.1)
· Packing group · DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code):	Warning: Flammable liquids 336

US ·

(Contd. on page 9)

Product Name: Purgeable Aromatics for Gasoline Identification

	(Contd. of page
· EMS Number:	F-E,S-D
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPO	OL73/78 and the IBC
Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

15 Pagulatam information	
15 Regulatory information	
· Safety, health and environmental regulations/legislation specific for the substance or mixture	
· Sara	
· Section 313 (Specific toxic chemical listings): All ingredients are listed.	
TSCA (Toxic Substances Control Act):	
All components have the value ACTIVE.	
· Hazardous Air Pollutants	
67-56-1 methanol	
71-43-2 benzene	
95-47-6 o-xylene	
100-41-4 ethylbenzene	
106-42-3 p-xylene	
106-46-7 1,4-dichlorobenzene	
108-38-3 m-xylene	
108-88-3 toluene	
108-90-7 chlorobenzene	
1634-04-4 Methyl-tert-butyl ether	
Proposition 65	
· Chemicals known to cause cancer:	
71-43-2 benzene	
100-41-4 ethylbenzene	
106-46-7 1,4-dichlorobenzene	
· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	
· Chemicals known to cause reproductive toxicity for males:	
71-43-2 benzene	
· Chemicals known to cause developmental toxicity:	
67-56-1 methanol	
71-43-2 benzene	
108-88-3 toluene	
· Carcinogenic categories	
· EPA (Environmental Protection Agency)	
71-43-2 benzene	A, K
95-47-6 o-xylene	I I
95-50-1 1,2-dichlorobenzene	D
100-41-4 ethylbenzene	
106-42-3 p-xylene	I I
	*

Product Name: Purgeable Aromatics for Gasoline Identification

		(Contd. of pag
108-38-3 n	1-xylene	Î
108-88-3 to	pluene	II
108-90-7 c	hlorobenzene	D
541-73-1 1	,3-dichlorobenzene	D
TLV (Thres	hold Limit Value established by ACGIH)	
71-43-2	benzene	4
95-47-6	o-xylene	
95-50-1	1,2-dichlorobenzene	
100-41-4	ethylbenzene	
106-42-3	p-xylene	
106-46-7	1,4-dichlorobenzene	
108-38-3	m-xylene	
108-88-3	toluene	
108-90-7	chlorobenzene	
1634-04-4	Methyl-tert-butyl ether	
NIOSH-Ca	(National Institute for Occupational Safety and Health)	
71-43-2 b	enzene	
106-46-7 1	,4-dichlorobenzene	

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

benzene

- · Hazard statements
- H225 Highly flammable liquid and vapor.
- H331 Toxic if inhaled.
- H340 May cause genetic defects.
- H350 May cause cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H370 Causes damage to the central nervous system and the visual organs.
- · Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

$\cdot \textit{National regulations:}$

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Product Name: Purgeable Aromatics for Gasoline Identification

(Contd. of page 10)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit BEI: Biological Exposure Limit

BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. IA: Carcinogenicity – Category IA
Repr. 2: Reproductive toxicity – Category 2
Carconsension of the Category 2
Category 3
Category 3
Category 3
Category 3
Category 3
Category 4
Cate STOT SE 1: Specific target organ toxicity (single exposure) - Category 1

1 Identification

- · Product identifier
- · Product Name: TCLP Volatiles Spike without Vinyl Chloride
- · Part Name: TCLP-V
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300)

Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

Muta. 1B H340 May cause genetic defects.

Carc. 1A H350 May cause cancer.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

 $STOT\,RE\,2\quad H373\ May\ cause\ damage\ to\ organs\ through\ prolonged\ or\ repeated\ exposure.$

- · Label elements
- $\cdot \textit{GHS label elements} \ \textit{The product is classified and labeled according to the Globally Harmonized System (GHS)}.$
- · Hazard pictograms







GHS02

GHS06

· Signal word Danger

· Hazard-determining components of labeling:

methanol

benzene

carbon tetrachloride

trichloroethylene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: TCLP Volatiles Spike without Vinyl Chloride

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1 Fire = 3Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerou	ss components:	
67-56-1	methanol	97.2%
78-93-3	butanone	1.0%
56-23-5	carbon tetrachloride	0.2%
67-66-3	chloroform	0.2%
71-43-2	benzene	0.2%
	1,1-dichloroethylene	0.2%
	trichloroethylene	0.2%
	1,4-dichlorobenzene	0.2%
107-06-2	1,2-dichloroethane	0.2%
127-18-4	tetrachloroethylene	0.2%
· Chemical	identification of the substance/preparation	

4 First-aid measures

108-90-7 chlorobenzene

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting

(Contd. on page 3)

0.2%

Product Name: TCLP Volatiles Spike without Vinyl Chloride

(Contd. of page 2)

- · Information for Doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

<i>PAC-1</i> :		
67-56-1	methanol	530 ppm
78-93-3	butanone	200 ppm
56-23-5	carbon tetrachloride	1.2 ppm
67-66-3	chloroform	2 ppm
71-43-2	benzene	52 ppm
75-35-4	1,1-dichloroethylene	45 ppm
79-01-6	trichloroethylene	130 ppm
106-46-7	1,4-dichlorobenzene	30 ppm
107-06-2	1,2-dichloroethane	50 ppm
108-90-7	chlorobenzene	10 ppm
127-18-4	tetrachloroethylene	35 ppm
PAC-2:		
67-56-1	methanol	2,100 ppm
78-93-3	butanone	2700* ppm
56-23-5	carbon tetrachloride	13 ppm
67-66-3	chloroform	64 ppm
71-43-2	benzene	800 ppm
75-35-4	1,1-dichloroethylene	500 ppm
79-01-6	trichloroethylene	450 ppm
106-46-7	1,4-dichlorobenzene	170 ppm
	1,2-dichloroethane	200 ppm
108-90-7	chlorobenzene	150 ppm
127-18-4	tetrachloroethylene	230 ppm
<i>PAC-3:</i>		
67-56-1	methanol	7200* ppm
78-93-3	butanone	4000* ppm
56-23-5	carbon tetrachloride	340 ppm
67-66-3	chloroform	3,200 ppm
71-43-2	benzene	4000* ppm

Product Name: TCLP Volatiles Spike without Vinyl Chloride

	(0)	Contd. of page 3)
75-35-4	1,1-dichloroethylene	1,000 ppm
79-01-6	trichloroethylene	3,800 ppm
106-46-7	1,4-dichlorobenzene	1,000 ppm
107-06-2	1,2-dichloroethane	300 ppm
	chlorobenzene	400 ppm
127-18-4	tetrachloroethylene	1,200 ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7

· Addi	tional information about design of technical systems: No further data; see item 7.
· Cont	rol parameters
· Com	ponents with limit values that require monitoring at the workplace:
67-5	6-1 methanol
PEL	Long-term value: 260 mg/m³, 200 ppm
REL	Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm Skin
TLV	Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm Skin; BEI
<i>78-9</i> .	3-3 butanone
PEL	Long-term value: 590 mg/m³, 200 ppm
REL	Short-term value: 885 mg/m³, 300 ppm Long-term value: 590 mg/m³, 200 ppm
TLV	Short-term value: 885 mg/m³, 300 ppm Long-term value: 590 mg/m³, 200 ppm BEI
56-2	3-5 carbon tetrachloride
PEL	Long-term value: 10 ppm Ceiling limit value: 25; 200* ppm *5-min peak in any 4 hrs
REL	Short-term value: 12.6* mg/m³, 2* ppm

Skin 67-66-3 chloroform

PEL Ceiling limit value: 240 mg/m³, 50 ppm REL Short-term value: 9.78* mg/m³, 2* ppm *60-min; See Pocket Guide App. A

*60-min;See Pocket Guide App. A

TLV Short-term value: 63 mg/m³, 10 ppm
Long-term value: 31 mg/m³, 5 ppm

(Contd. on page 5)

Product Name: TCLP Volatiles Spike without Vinyl Chloride

TIV	Long-term value: 49 mg/m³, 10 ppm (Contd. of pag
	3-2 benzene
	Short-term value: 15* mg/m³, 5* ppm
PEL	Long-term value: 13* mg/m³, 1* ppm
	*table Z-2 for exclusions in 29CFR1910.1028(d)
RFI	Short-term value: 1 ppm
KEL	Long-term value: 0.1 ppm
	See Pocket Guide App. A
TI V	Short-term value: 8 mg/m³, 2.5 ppm
ı,	Long-term value: 1.6 mg/m ³ , 0.5 ppm
	Skin; BEI
75-3	5-4 1,1-dichloroethylene
	See Pocket Guide App.A
	Long-term value: 20 mg/m³, 5 ppm
	1-6 trichloroethylene
PEL	Long-term value: 100 ppm
	Ceiling limit value: 200; 300* ppm *5-min peak in any 2 hrs
DEI	
	See Pocket Guide Apps. A and C
TLV	Short-term value: 135 mg/m³, 25 ppm
	Long-term value: 54 mg/m³, 10 ppm BEI
107	46-7 1,4-dichlorobenzene
	Long-term value: 450 mg/m³, 75 ppm
	See Pocket Guide App. A
TLV	Long-term value: 60 mg/m³, 10 ppm
107-0	06-2 1,2-dichloroethane
PEL	Long-term value: 50 ppm
	Ceiling limit value: 100; 200* ppm
	*5-min peak in any 3 hrs
REL	Short-term value: 8 mg/m³, 2 ppm
	Long-term value: 4 mg/m³, 1 ppm
	See Pocket Guide Apps. A and C
	Long-term value: 40 mg/m³, 10 ppm
127-1	18-4 tetrachloroethylene
PEL	Long-term value: 100 ppm
	Ceiling limit value: 200; 300* ppm
	*5-min peak in any 3 hrs
REL	Minimize workplace exp. concs.;Pocket Guide App. A
TLV	Short-term value: 685 mg/m³, 100 ppm
	Long-term value: 170 mg/m³, 25 ppm
	BEI
Ingre	edients with biological limit values:
67-50	6-1 methanol
BEI	15 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Methanol (background, nonspecific)
78-93	3-3 butanone
BEI	2 mg/L
	Medium: urine
	Time: end of shift
	Parameter: MEK
	3-2 benzene
BEI	25 μg/g creatinine
	Medium: urine
	Time: end of shift Parameter
	Danamatan, C. Dhamily an antunia acid (backsman)
	Parameter: S-Phenylmercapturic acid (background
	Parameter: S-Phenylmercapturic acid (background
	Parameter: S-Phenylmercapturic acid (background 500 μg/g creatinine
	Parameter: S-Phenylmercapturic acid (background

Product Name: TCLP Volatiles Spike without Vinyl Chloride

(Contd. of page 5)

79-01-6 trichloroethylene

BEI 15 mg/L

Medium: urine

Time: end of shift at end of workweek Parameter: Trichloroacetic acid (nonspecific)

0.5 mg/L Medium: blood

Time: end of shift at end of workweek

Parameter: Trichloroethanol without hydrolysis (nonspecific)

Medium: blood

Time: end of shift at end of workweek

Parameter: Trichloroethylene (semi-quantitative)

Medium: end-exhaled air

Time: end of shift at end of workweek

Parameter: Trichloroethylene (semi-quantitative)

127-18-4 tetrachloroethylene

BEI 3 ppm

Medium: end-exhaled air Time: prior to shift

Parameter: Tetrachloroethylene

0.5 mg/L

Medium: blood Time: prior to shift

Parameter: Tetrachloroethylene

· Additional information: The lists that were valid during the creation were used as basis.

- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

Product Name: TCLP Volatiles Spike without Vinyl Chloride

(Contd. of page 6)

9 Physical and chemical propertie	es ·
· Information on basic physical and o · General Information · Appearance:	chemical properties
Form:	Liquid
Color:	According to product specification
· Odor:	Characteristic
· Odour Threshold:	Not applicable.
· pH-value:	Not applicable.
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 64.7 °C (148.5 °F)
· Flash point:	< 23 °C (< 73.4 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	455 °C (851 °F)
· Decomposition temperature:	Not applicable.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	5.5 Vol %
Upper:	44 Vol %
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Density at 20 °C (68 °F)	0.80003-0.80006 g/cm³ (6.67625-6.6765 lbs/gal)
· Relative density	Not applicable.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	er): Not applicable.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	99.0 %
VOC content:	98.80 %
Solids content:	0.2 %
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- $\cdot \textit{Conditions to avoid No further relevant information available}.$
- $\cdot \textbf{Incompatible materials:} \ No \ further \ relevant \ information \ available.$
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

	•	
· LD/LC50 values that are relevant for classification:		
67-56-1 m	ethanol	
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15.800 mg/kg (rabbit)

(Contd. on page 8)

Product Name: TCLP Volatiles Spike without Vinyl Chloride

(Contd. of page 7) 56-23-5 carbon tetrachloride LD50 Oral2,350 mg/kg (rat) Dermal LD50 5,070 mg/kg (rat) 71-43-2 benzene LD50 4,894 mg/kg (rat) OralLD50 48 mg/kg (mouse) DermalInhalative LC50/4 h 9,980 mg/l (mouse) 79-01-6 trichloroethylene Oral LD50 2,402 mg/kg (mouse) LD50 Dermal 8,450 mg/kg (mouse) 106-46-7 1,4-dichlorobenzene LD50 500 mg/kg (rat) 107-06-2 1,2-dichloroethane Oral LD50 670 mg/kg (rat) Dermal LD50 2,800 mg/kg (rat)

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

The product can cause inheritable damage.

· Carcinogenic categories

· IARC (In	ternational Agency for Research on Cancer)	
56-23-5	carbon tetrachloride	2 <i>B</i>
67-66-3	chloroform	2B
71-43-2	benzene	1
75-35-4	1,1-dichloroethylene	2 <i>B</i>
79-01-6	trichloroethylene	1
106-46-7	1,4-dichlorobenzene	2B
107-06-2	1,2-dichloroethane	2 <i>B</i>
127-18-4	tetrachloroethylene	2A
· NTP (Nat	tional Toxicology Program)	
56-23-5	carbon tetrachloride	R
67-66-3	chloroform	R
71-43-2	benzene	K
79-01-6	trichloroethylene	K
106-46-7	1,4-dichlorobenzene	R
107-06-2	1,2-dichloroethane	R
127-18-4	tetrachloroethylene	R
· OSHA-Ca	a (Occupational Safety & Health Administration)	<u> </u>
71-43-2	benzene	

12 Ecological information

- · Toxicity
- $\cdot \textbf{\textit{Aquatic toxicity:}} \ \textit{No further relevant information available}.$
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

(Contd. on page 9)

Reviewed on 11/06/2020 Printing date 11/06/2020

Product Name: TCLP Volatiles Spike without Vinyl Chloride

(Contd. of page 8)

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- $\cdot \ Waste \ treatment \ methods$
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information	
· UN-Number	
· DOT, ADR, IMDG, IATA	UN1230
· UN proper shipping name	
· <i>DOT</i> · <i>ADR</i>	Methanol 1230 METHANOL
· IMDG, IATA	METHANOL METHANOL
· Transport hazard class(es)	
· DOT	
CAMMALE LOSIS TOXIC B	
· Class	3 Flammable liquids
· Label	3, 6.1
ADR	
· Class · Label	3 Flammable liquids 3+6.1
· IMDG	
· Class · Label	3 Flammable liquids 3/6.1
·IATA	
· Class · Label	3 Flammable liquids 3 (6.1)
· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	336
· EMS Number:	F-E,S-D

(Contd. on page 10)

Product Name: TCLP Volatiles Spike without Vinyl Chloride

	(Contd. of pag
Stowage Category	В
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL7	3/78 and the IBC
Code	Not applicable.
Transport/Additional information:	
· ADR	
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
· · ·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN ''Model Regulation'':	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture

· Sara		
· Section 313 (Specific toxic chemical listings):		
67-56-1	methanol	
56-23-5	carbon tetrachloride	
67-66-3	chloroform	
71-43-2	benzene	
	1,1-dichloroethylene	
79-01-6	trichloroethylene	
106-46-7	1,4-dichlorobenzene	
107-06-2	1,2-dichloroethane	
108-90-7	chlorobenzene	
127-18-4	tetrachloroethylene	
· TSCA (Te	· TSCA (Toxic Substances Control Act):	
All compo	All components have the value ACTIVE.	
Harandous Air Dollutants		

Au components have the value AC11VL.		
· Hazardous Air Pollutants		
	methanol	
	carbon tetrachloride	
	chloroform	
71-43-2	benzene	
	1,1-dichloroethylene	
	trichloroethylene	
	1,4-dichlorobenzene	
	1,2-dichloroethane	
	chlorobenzene	
127-18-4	tetrachloroethylene	

Proposition 65

· Proposition 65	
· Chemicals known to cause cancer:	
56-23-5	carbon tetrachloride
67-66-3	chloroform
	benzene
	1,1-dichloroethylene
	trichloroethylene
	1,4-dichlorobenzene
107-06-2	1,2-dichloroethane
127-18-4	tetrachloroethylene
· Chemicals known to cause reproductive toxicity for females:	

None of the ingredients is listed.

Product Name: TCLP Volatiles Spike without Vinyl Chloride

Chemicals known to cause reproductive toxicity for males: 71-43-2 benzene	
71-43-2 benzene	
79-01-6 trichloroethylene	
· Chemicals known to cause developmental toxicity:	
67-56-1 methanol	
67-66-3 chloroform	
71-43-2 benzene	
79-01-6 trichloroethylene	

· Carcinogenic categories

· EPA (Environmental Protection Agency)		
<i>78-93-3</i>	butanone	I
56-23-5	carbon tetrachloride	L
	y .	B2, L, NL
	benzene	A, K/L
75-35-4	1,1-dichloroethylene	C, S (inh.), I (oral)
79-01-6	trichloroethylene	СаН
	1,2-dichloroethane	B2
108-90-7	chlorobenzene	D
127-18-4	tetrachloroethylene	L
COLUMN TO COMP	THE STATE OF THE S	

· TLV (Thi	· TLV (Threshold Limit Value established by ACGIH)		
56-23-5	carbon tetrachloride	A2	
	chloroform	A3	
		A1	
75-35-4	1,1-dichloroethylene	A4	
	· · · · · · · · · · · · · · · · · · ·	A2	
		A3	
	,	A4	
108-90-7	chlorobenzene	A3	
127-18-4	tetrachloroethylene	A3	

· NIOSH-Ca (National Institute for Occupational Safety and Health)		
56-23-5	carbon tetrachloride	
	chloroform	
71-43-2	benzene	
79-01-6	trichloroethylene	
	1,4-dichlorobenzene	
	1,2-dichloroethane	
127-18-4	tetrachloroethylene	
CHCLL	11 4 70 1 4 1 10 1 11 1 1 1 1 4 4 6 1 1 1 1 1 1 1 1 1 1	

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

benzene

carbon tetrachloride

trichloroethylene

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to the central nervous system and the visual organs.

H373 May cause damage to organs through prolonged or repeated exposure.

Product Name: TCLP Volatiles Spike without Vinyl Chloride

(Contd. of page 11)

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:

· Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1A: Carcinogenicity – Category 1A

Repr. 2: Reproductive toxicity - Category 2 STOT SE 1: Specific target organ toxicity (single exposure) - Category I

STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

1 Identification

- · Product identifier
- · Product Name: TRIHALOMETHANES
- · Part Name: THM-X-400
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen,

NJ 08840 USA

- $\cdot \textbf{Information department:} \ product \ safety \ department$
- Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: TRIHALOMETHANES

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
67-56-1 n	nethanol	99.84%
· Chemical	identification of the substance/preparation	
	chloroform	0.04%
75-25-2	bromoform	0.04%
75-27-4	bromodichloromethane	0.04%
124-48-1	dibromochloromethane	0.04%

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

 $Remove\ breathing\ apparatus\ only\ after\ contaminated\ clothing\ have\ been\ completely\ removed.$

In case of irregular breathing or respiratory arrest provide artificial respiration.

 $\cdot \textit{After inhalation:}$

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

 $\cdot \textit{Environmental precautions:}$

Dilute with plenty of water.

(Contd. on page 3)

Product Name: TRIHALOMETHANES

(Contd. of page 2)

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

<i>PAC-1:</i>		
67-56-1	methanol	530 ppm
67-66-3	chloroform	2 ppm
75-25-2	bromoform	1.5 ppm
75-27-4	bromodichloromethane	1.3 mg/m
124-48-1	dibromochloromethane	1.1 mg/m
PAC-2:		
67-56-1	methanol	2,100 ppi
67-66-3	chloroform	64 ppm
75-25-2	bromoform	6.8 ppm
75-27-4	bromodichloromethane	14 mg/m ³
124-48-1	dibromochloromethane	12 mg/m ⁻
<i>PAC-3:</i>		
67-56-1	methanol	7200* pp.
67-66-3	chloroform	3,200 ppn
75-25-2	bromoform	41 ppm
75-27-4	bromodichloromethane	85 mg/m ³
124-48-1	dibromochloromethane	73 mg/m³

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

- Store in cool, dry conditions in well sealed receptacles.
- $\cdot \textit{Specific end use}(s) \textit{ No further relevant information available}.$

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

(Contd. on page 4)

Product Name: TRIHALOMETHANES

(Contd. of page 3)

TLV Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of glove:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid

Color: According to product specification

· Odor: Characteristic
 · Odour Threshold: Not applicable.
 · pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 64.7 °C (148.5 °F)

• Flash point: $< 23 \, ^{\circ}C \, (< 73.4 \, ^{\circ}F)$

• Flammability (solid, gaseous): Not applicable. • Ignition temperature: 455 °C (851 °F)

· Decomposition temperature: Not applicable.

· Auto igniting: Product is not selfigniting.

• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

(Contd. on page 5)

Reviewed on 05/08/2020 Printing date 11/06/2020

Product Name: TRIHALOMETHANES

		(Contd. of page
· Explosion limits:		
Lower:	5.5 Vol %	
Upper:	44 Vol %	
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)	
· Density at 20 °C (68 °F)	0.79225 g/cm³ (6.61133 lbs/gal)	
· Relative density	Not applicable.	
· Vapor density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water:	Fully miscible.	
· Partition coefficient (n-octanol/wate	er): Not applicable.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
· Solvent content:		
Organic solvents:	99.9 %	
VOC content:	99.88 %	
Solids content:	0.0 %	
· Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC5	· LD/LC50 values that are relevant for classification:	
67-56-1	metha	nol
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Toxic

	· Carcinogenic categories		
· IARC (In	· IARC (International Agency for Research on Cancer)		
67-66-3	chloroform	2B	
75-25-2	bromoform	3	
75-27-4	bromodichloromethane	2B	
124-48-1	dibromochloromethane	3	
· NTP (Na	tional Toxicology Program)		
67-66-3	chloroform	R	
75-27-4	bromodichloromethane	R	
· OSHA-C	· OSHA-Ca (Occupational Safety & Health Administration)		
None of t	he ingredients is listed.		
		**	

Product Name: TRIHALOMETHANES

(Contd. of page 5)

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- · UN-Number
- · DOT, ADR, IMDG, IATA

UN1230

- · UN proper shipping name
- $\cdot DOT$

 \cdot ADR

· IMDG, IATA

Methanol 1230 METHANOL

METHANOL

- · Transport hazard class(es)
- $\cdot DOT$





· Class 3 Flammable liquids

• **Label** 3, 6.1

 $\cdot ADR$





· Class 3 Flammable liquids

• **Label** 3+6.1

 \cdot *IMDG*





· Class 3 Flammable liquids

(Contd. on page 7)

Product Name: TRIHALOMETHANES

	(Contd. of p
Label	3/6.1
IATA S S S S S S S S S S S S S S S S S S	
Class	3 Flammable liquids
Label	3 (6.1)
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Category Stowage Code	Warning: Flammable liquids 336 F-E,S-D B SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/. Code	78 and the IBC Not applicable.
Transport/Additional information:	
ADR Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
IMDG	
Limited quantities (LQ) Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- $\cdot \textit{Safety, health and environmental regulations/legislation specific for the substance or \textit{mixture}}$
- · Sara

· Sara			
· Section .	· Section 313 (Specific toxic chemical listings):		
67-56-1	methanol		
	chloroform		
75-25-2	bromoform		
75-27-4	bromodichloromethane		
TO C 4 (F			

- · TSCA (Toxic Substances Control Act):
- All components have the value ACTIVE.
- · Hazardous Air Pollutants

0/-30-1	metnanoi
67-66-3	chloroform
75-25-2	bromoform

Proposition 65

- · Chemicals known to cause cancer:
- 67-66-3 chloroform
- 75-25-2 bromoform
- 75-27-4 bromodichloromethane
- · Chemicals known to cause reproductive toxicity for females:
- None of the ingredients is listed.
- · Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

(Contd. on page 8)

Product Name: TRIHALOMETHANES

(Contd. of page 7) 67-66-3 chloroform

· Carcinogenic categories

· EPA (Environmental Protection Agency)		
67-66-3	chloroform	B2, L, NL
75-25-2	bromoform	B2
75-27-4	bromodichloromethane	B2
124-48-1	dibromochloromethane	C

· TLV (Threshold Limit Value established by ACGIH)

67-66-3	chloroform	A3
75-25-2	bromoform	A3

· NIOSH-Ca (National Institute for Occupational Safety and Health)

67-66-3 chloroform

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapors/spray. P260

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation

IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

(Contd. on page 9)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: TRIHALOMETHANES

LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

(Contd. of page 8)

1 Identification

- · Product identifier
- · Product Name: CUSTOM INT STD
- · Part Name: XINF-IS-4
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: CUSTOM INT STD

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions

· Description. Mixing of the substances usied below with nonnazarabus additions.		
· Dangerous components:		
67-56-1 m	ethanol	99.875%
· Chemical i	dentification of the substance/preparation	
344-04-7	Bromopentafluorobenzene	0.05%
462-06-6	fluorobenzene	0.025%
	Chlorobenzene-d5	0.025%
3855-82-1	1,4-Dichlorobenzene-d4	0.025%

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

 $Remove\ breathing\ apparatus\ only\ after\ contaminated\ clothing\ have\ been\ completely\ removed.$

In case of irregular breathing or respiratory arrest provide artificial respiration.

 $\cdot \textit{After inhalation:}$

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

 $\cdot \textit{Environmental precautions:}$

Dilute with plenty of water.

(Contd. on page 3)

Product Name: CUSTOM INT STD

(Contd. of page 2)

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

11 ottower fiction of active for otherways	
· PAC-1:	
67-56-1 methanol	530 ppm
462-06-6 fluorobenzene	30 mg/m ⁻
· PAC-2:	
67-56-1 methanol	2,100 ppn
462-06-6 fluorobenzene	330 mg/m
· PAC-3:	
67-56-1 methanol	7200* ppm
462-06-6 fluorobenzene	1,200 mg/m

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

 $\cdot \textit{Specific end use}(s) \textit{ No further relevant information available}.$

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm
REL Short-term value: 325 mg/m³, 250 ppm
Long-term value: 260 mg/m³, 200 ppm
Skin
TLV Short-term value: 328 mg/m³, 250 ppm

Long-term value: 262 mg/m³, 200 ppm Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

· Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 4)

Product Name: CUSTOM INT STD

(Contd. of page 3)

- · Exposure controls
- · Personal protective equipment:
- $\cdot \textit{General protective and hygienic measures:} \\$

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

Information	on basis	- Lucioal	~ d	ala amai a al	
· Information	on vasic	priysicai	ana	cnemicai	properties

· General Information

· Appearance:

Form: Liquid
Color: Colorless
Odor: Alcohol-like
Odour Threshold: Not applicable.

pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 64.7 °C (148.5 °F)

• Flash point: < 23 °C (< 73.4 °F)

Flammability (solid, gaseous): Not applicable.
 Ignition temperature: 455 °C (851 °F)

• Decomposition temperature: Not applicable.

· Auto igniting: Product is not selfigniting.

• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

 Lower:
 5.5 Vol %

 Upper:
 44 Vol %

· Vapor pressure at 20 °C (68 °F): 128 hPa (96 mm Hg)

• Density at 20 °C (68 °F) 0.79 g/cm³ (6.59255 lbs/gal)

Relative density
 Vapor density
 Evaporation rate
 Not applicable.
 Not applicable.

(Contd. on page 5)

Product Name: CUSTOM INT STD

		(Contd. of page 4)
· Solubility in / Miscibility with		
Water:	Fully miscible.	
· Partition coefficient (n-octanol/	water): Not applicable.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
· Solvent content:		
Organic solvents:	99.9 %	
VOC content:	99.88 %	
Solids content:	0.0 %	
· Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values that are relevant for classification:		
67-56-1	metha	nol
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- · Primary irritant effect:
- · on the eye: No irritating effect.
- $\cdot \textit{Sensitization:} \ \textit{No sensitizing effects known.}$
- $\cdot \textit{Additional toxicological information:}$

The product shows the following dangers according to internally approved calculation methods for preparations: Toxic

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- $\cdot \textit{Bioaccumulative potential No further relevant information available}.$
- · Mobility in soil No further relevant information available.
- $\cdot Additional\ ecological\ information:$
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

(Contd. on page 6)

Product Name: CUSTOM INT STD

· Other adverse effects No further relevant information available.

(Contd. of page 5)

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.
 Recommended cleansing agent: Water, if necessary with cleansing agents.

Transport information	
UN-Number DOT, ADR, IMDG, IATA	UN1230
UN proper shipping name DOT ADR IMDG, IATA	Methanol 1230 METHANOL METHANOL
Transport hazard class(es)	
DOT TOXIC TOXIC 1	
Class Label	3 Flammable liquids 3, 6.1
ADR	
Class Label	3 Flammable liquids 3+6.1
IMDG	
Class Label	3 Flammable liquids 3/6.1
IATA O O O O O O O O O O O O O	
Class Label	3 Flammable liquids 3 (6.1)
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Category Stowage Code	Warning: Flammable liquids 336 F-E,S-D B SW2 Clear of living quarters.

Product Name: CUSTOM INT STD

	(Contd. of page 6)
· Transport in bulk according to Annex II of MARPO. Code	L73/78 and the IBC Not applicable.
· Transport/Additional information:	
· ADR · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- $\cdot \textit{Safety, health and environmental regulations/legislation specific for the substance or \textit{mixture} \\$
- · Sara

· Section 313 (Specific toxic chemical	l listings):	
67-56-1 methanol		

· TSCA (Toxic Substances Control Act):

67-56-1	methanol	ACTIVE
344-04-7	Bromopentafluorobenzene	ACTIVE
462-06-6	fluorobenzene	<i>ACTIVE</i>

- · Hazardous Air Pollutants
- 67-56-1 methanol
- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02 GHS06

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

(Contd. on page 8)

(Contd. of page 7)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: CUSTOM INT STD

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

Take precautionary measures against static discharge. P243 P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

· Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

· Date of preparation / last revision 11/06/2020 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids - Category 2

Acute Tox. 3: Acute toxicity – Category 3 STOT SE 1: Specific target organ toxicity (single exposure) – Category I

1 Identification

- · Product identifier
- · Product Name: Custom 5 compound organic standard
- · Part Name: XQ-1314
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

$\cdot \textit{Hazard statements}$

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Product Name: Custom 5 compound organic standard

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous	components:				
67-56-1 methanol 99					
	dentification of the substance/preparation				
105-53-3	diethyl malonate	0.002%			
	fluorobenzene	0.002%			
	(2H8)toluene	0.002%			
	Chlorobenzene-d5	0.002%			
3855-82-1	1,4-Dichlorobenzene-d4	0.002%			

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

(Contd. on page 3)

(Contd. of page 2)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: Custom 5 compound organic standard

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

	· · · · · · · · · · · · · · · · · · ·	
· PAC-1:		
	methanol	530 ppm
105-53-3	diethyl malonate	6.9 ppm
	fluorobenzene	30 mg/m³
2037-26-5	(2H8)toluene	67 ppm
· PAC-2:		
67-56-1	methanol	2,100 ppm
105-53-3	diethyl malonate	76 ppm
	fluorobenzene	330 mg/m³
2037-26-5	(2H8)toluene	560 ppm
· PAC-3:		
67-56-1	methanol	7200* ppm
105-53-3	diethyl malonate	450 ppm
462-06-6	fluorobenzene	$1,200 \text{ mg/m}^3$
2037-26-5	(2H8)toluene	3,700 ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm

REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 328 mg/m³, 250 ppm

Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

(Contd. on page 4)

Product Name: Custom 5 compound organic standard

(Contd. of page 3)

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information

· Appearance:

Form: Liquid

Color: According to product specification
Odor: Characteristic

· Odour Threshold: Not applicable.· pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 64.7 °C (148.5 °F)

• Flash point: $< 23 \, ^{\circ}C \, (< 73.4 \, ^{\circ}F)$

· Flammability (solid, gaseous): Not applicable.

• Ignition temperature: 455 °C (851 °F)

· Decomposition temperature: Not applicable.

· Auto igniting: Product is not selfigniting.

• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

 Lower:
 5.5 Vol %

 Upper:
 44 Vol %

(Contd. on page 5)

Product Name: Custom 5 compound organic standard

	(Contd. of page 4)
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)
· Density at 20 °C (68 °F)	0.78998 g/cm³ (6.59238 lbs/gal)
· Relative density	Not applicable.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Fully miscible.
· Partition coefficient (n-octanol/wate	r); Not applicable.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	100.0 %
VOC content:	99.99 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC5	0 valu	es that are relevant for classification:
67-56-1	metha	nol
Oral	LD50	5,628 mg/kg (rat)
Dermal	LD50	15,800 mg/kg (rabbit)

- Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- $\cdot \textit{Persistence and degradability} \ \textit{No further relevant information available}.$
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.

(Contd. on page 6)

(Contd. of page 5)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: Custom 5 compound organic standard

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14	1 ran	sport	ււոյս	rma	uon

· UN-Number

· DOT, ADR, IMDG, IATA

UN1230

· UN proper shipping name

· DOT · ADR Methanol 1230 METHANOL

· IMDG, IATA

METHANOL

- · Transport hazard class(es)
- $\cdot DOT$





· Class · Label 3 Flammable liquids

3, 6.1

 $\cdot ADR$





· Class · Label 3 Flammable liquids

3+6.1

 \cdot IMDG





· Class · Label 3 Flammable liquids

3/6.1

 $\cdot \textit{IATA}$





· Class

3 Flammable liquids

 \cdot Label

3 (6.1)

· Packing group

· DOT, ADR, IMDG, IATA

II

(Contd. on page 7)

Product Name: Custom 5 compound organic standard

	(Contd. of page
Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	336
· EMS Number:	F-E,S-D
· Stowage Category	В
· Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/	78 and the IBC
Code	Not applicable.
· Transport/Additional information:	
Excepted quantities (EQ)	Code: E2
· ·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
· ·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN ''Model Regulation'':	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture

Suru					
· Section 313 (Specific toxic chemical listings):					
67-56-1 methanol					
· TSCA (Toxic Substances Control Act):					
67-56-1 methanol	ACTIVE				
105-53-3 diethyl malonate	ACTIVE				
462-06-6 fluorobenzene	ACTIVE				
· Hazardous Air Pollutants					
67-56-1 methanol					

- 67-56-1 methanol
- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

(Contd. of page 7)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: Custom 5 compound organic standard

· Signal word Danger

· Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P210

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: product safety department
- · Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

- · Date of preparation / last revision 11/06/2020 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2 Acute Tox. 3: Acute toxicity – Category 3

STOT SE 1: Specific target organ toxicity (single exposure) - Category 1

1 Identification

- · Product identifier
- · Product Name: Custom
- · Part Name: XQ-3603
- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: SPEX CertiPrep, LLC. 203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number: Emergency Phone Number (24 hours) CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Product Name: Custom

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

Descripin	m Hamare of the substances histed below with normagardous additions.							
0	· Dangerous components:							
67-56-1 1	67-56-1 methanol 99							
· Chemical	identification of the substance/preparation							
84-66-2	diethyl phthalate	0.01%						
119-36-8	methyl salicylate	0.01%						
	tributyl phosphate	0.01%						
756-79-6	dimethyl methylphosphonate	0.01%						

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

 $Remove\ breathing\ apparatus\ only\ after\ contaminated\ clothing\ have\ been\ completely\ removed.$

In case of irregular breathing or respiratory arrest provide artificial respiration.

 \cdot After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

 $\cdot \textit{Environmental precautions:}$

Dilute with plenty of water.

(Contd. on page 3)

Product Name: Custom

(Contd. of page 2)

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

	. Tienen et uet u fer enemeus	
· PAC-1:		
67-56-1	methanol	530 ppm
84-66-2	diethyl phthalate	15 mg/m
119-36-8	methyl salicylate	2.3 ppm
126-73-8	tributyl phosphate	1.4 ppm
756-79-6	dimethyl methylphosphonate	10 mg/m
· PAC-2:		
67-56-1	methanol	2,100 ppr
84-66-2	diethyl phthalate	300 mg/n
119-36-8	methyl salicylate	25 ppm
126-73-8	tributyl phosphate	8.3 ppm
756-79-6	dimethyl methylphosphonate	110 mg/n
· PAC-3:		
67-56-1	methanol	7200* ppm
84-66-2	diethyl phthalate	1,800 mg/n
119-36-8	methyl salicylate	150 ppm
126-73-8	tributyl phosphate	125 ppm
756-79-6	dimethyl methylphosphonate	1,600 mg/n

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

- Store in cool, dry conditions in well sealed receptacles.
- $\cdot \textit{Specific end use}(s) \textit{ No further relevant information available}.$

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

(Contd. on page 4)

Product Name: Custom

(Contd. of page 3)

TLV Short-term value: 328 mg/m³, 250 ppm Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of glove

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid

Color: According to product specification

· Odor: Characteristic
 · Odour Threshold: Not applicable.
 · pH-value: Not applicable.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 64.7 °C (148.5 °F)

• Flash point: < 23 °C (< 73.4 °F)

· Flammability (solid, gaseous): Not applicable.

• Ignition temperature: 455 °C (851 °F)
• Decomposition temperature: Not applicable.

· Auto igniting: Product is not selfigniting.

• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

(Contd. on page 5)

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Custom

		(Contd. of page 4
· Explosion limits: Lower: Upper:	5.5 Vol % 44 Vol %	
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)	
· Density at 20 °C (68 °F) · Relative density · Vapor density · Evaporation rate	0.79013 g/cm³ (6.59363 lbs/gal) Not applicable. Not applicable. Not applicable.	
Solubility in / Miscibility with Water:	Fully miscible.	
· Partition coefficient (n-octanol/wate	r): Not applicable.	
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.	
· Solvent content: Organic solvents: VOC content:	100.0 % 99.97 %	
Solids content: Other information	0.0 % No further relevant information available.	

10 Stability and reactivity

- $\cdot \textit{Reactivity No further relevant information available}.$
- · Chemical stability
- · Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

67-56-1 methanol

 Oral
 LD50
 5,628 mg/kg (rat)

 Dermal
 LD50
 15,800 mg/kg (rabbit)

- · Primary irritant effect:
- \cdot on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Toxic

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.

(Contd. on page 6)

Product Name: Custom

(Contd. of page 5)

- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- · UN-Number
- · DOT, ADR, IMDG, IATA

UN1230

 $\cdot \textit{UN proper shipping name}$

 $\cdot DOT$

Methanol 1230 METHANOL $\cdot ADR$ METHANOL

· IMDG, IATA · Transport hazard class(es)

 $\cdot DOT$





· Class 3 Flammable liquids

· Label 3, 6.1

 \cdot ADR





· Class 3 Flammable liquids

· Label

 \cdot IMDG





· Class 3 Flammable liquids

· Label 3/6.1

 \cdot IATA





3 Flammable liquids · Class

· Label 3(6.1)

(Contd. on page 7)

Product Name: Custom

	(Contd. of page
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Flammable liquids
Hazard identification number (Kemler code):	336
EMS Number:	F-E,S-D
Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Annex II of MARPOL73/7	8 and the IBC
Code	Not applicable.
Transport/Additional information:	
ADR	
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
· · ~·	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Section 313 (Specific toxic chemical listings):

67-56-1 methanol

· TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

- · Hazardous Air Pollutants
- 67-56-1 methanol
- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

84-66-2 diethyl phthalate

D

· TLV (Threshold Limit Value established by ACGIH)

84-66-2 diethyl phthalate

A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 11/06/2020

Product Name: Custom

(Contd. of page 7)

· Signal word Danger

· Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P210

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge. P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

· Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

· Date of preparation / last revision 11/06/2020 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2 Acute Tox. 3: Acute toxicity – Category 3

STOT SE 1: Specific target organ toxicity (single exposure) - Category 1

1 Identification

- · Product identifier
- · Product Name: METHANOL
- · Part Name: XS-2380-30ML
- · CAS Number:

67-56-1

- EC number: 200-659-6
- · Index number:

603-001-00-X

- · Application of the substance / the mixture Certified Reference Material
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

SPEX CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 Health hazard

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS06



GHS02

· Hazard-determining components of labeling:

methanol

· Hazard statements

· Signal word Danger

H225 Highly flammable liquid and vapor.

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 2)

(Contd. of page 1)

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: METHANOL

P301+P310 If swallowed: Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P312 Call a poison center/doctor if you feel unwell.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 67-56-1 methanol
- · Identification number(s)
- · EC number: 200-659-6
- · Index number: 603-001-00-X

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- $\cdot \textit{After skin contact:} \textit{Immediately wash with water and soap and rinse thoroughly}.$
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing:

Do not induce vomiting; immediately call for medical help.

Do not give anything to eat or drink - Do not induce vomitting

- · Information for Doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

Product Name: METHANOL

(Contd. of page 2)

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Prevent seepage into sewage system, workpits and cellars.

Dilute with plenty of water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

• PAC-1: 530 ppm

· PAC-2:

2,100 ppm

· PAC-3:

7200* ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- $\cdot \textit{Control parameters}$

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

PEL Long-term value: 260 mg/m³, 200 ppm

REL Short-term value: 325 mg/m³, 250 ppm

Long-term value: 260 mg/m³, 200 ppm

Skin

TLV Short-term value: 328 mg/m³, 250 ppm

Long-term value: 262 mg/m³, 200 ppm

Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

(Contd. on page 4)

Product Name: METHANOL

(Contd. of page 3)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- · Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:



Tightly sealed goggles

	9	PI	ıysi	cal	and	C	ıemi	cal	pro	perti	ies
--	---	----	------	-----	-----	---	------	-----	-----	-------	-----

- · Information on basic physical and chemical properties
- · General Information

· Appearance:

Form:	Liquid
Color:	Colorless
· Odor:	Alcohol-like
· Odour Threshold:	Not applicable.

· pH-value: Not applicable.

 $\cdot \textit{Change in condition}$

Melting point/Melting range: $-98 \degree C (-144.4 \degree F)$ Boiling point/Boiling range: $64.7 \degree C (148.5 \degree F)$ Clash point: $11 \degree C (51.8 \degree F)$

• Flash point: 11 °C (51.8 °F)
• Flammability (solid, gaseous): Not applicable.

• Ignition temperature: 455 °C (851 °F)

Decomposition temperature: Not applicable.
 Auto igniting: Not determined.

• Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

 Lower:
 5.5 Vol %

 Upper:
 44 Vol %

· Vapor pressure at 20 °C (68 °F): 128 hPa (96 mm Hg)

• Density at 20 °C (68 °F) 0.79 g/cm³ (6.59255 lbs/gal)

· Relative density Not applicable.

(Contd. on page 5)

Product Name: METHANOL

		(Contd. of page 4)
· Vapor density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with		
Water:	Fully miscible.	
· Partition coefficient (n-octanol/wo	t ter): Not applicable.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
Organic solvents:	100.0 %	
VOC content:	100.00 %	
Solids content:	0.0 %	
· Other information	No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:

67-56-1 methanol

 Oral
 LD50
 5,628 mg/kg (rat)

 Dermal
 LD50
 15,800 mg/kg (rabbit)

- · Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- $\cdot \textit{Additional toxicological information:}$
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes: Not hazardous for water.
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- $\cdot \textit{Other adverse effects} \ \textit{No further relevant information available}.$

Product Name: METHANOL

(Contd. of page 5)

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:

Code

- Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

4 Transport information	
· UN-Number · DOT, ADR, IMDG, IATA	UN1230
· UN proper shipping name · DOT · ADR · IMDG, IATA	Methanol 1230 METHANOL METHANOL
· Transport hazard class(es)	
· DOT	
· Class · Label	3 Flammable liquids 3, 6.1
ADR	
· Class · Label	3 Flammable liquids 3+6.1
· IMDG	
· Class · Label	3 Flammable liquids 3/6.1
IATA Separate Separa	
· Class · Label	3 Flammable liquids 3 (6.1)
· Packing group · DOT, ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category · Stowage Code	Warning: Flammable liquids 336 F-E,S-D B SW2 Clear of living quarters.

Not applicable.

(Contd. on page 7)

Product Name: METHANOL

(Contd. of page 6)

 $\cdot \textit{Transport/Additional information:}$

 $\cdot ADR$

· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· IMDG

· Limited quantities (LQ)

· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara
- · Section 313 (Specific toxic chemical listings):

Substance is listed.

· TSCA (Toxic Substances Control Act):

ACTIVE

· Hazardous Air Pollutants

Substance is listed.

- · Proposition 65
- · Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

- · GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

HS02

002 GI

· Signal word Danger

· Hazard-determining components of labeling:

methanol

· Hazard statements

H225 Highly flammable liquid and vapor.

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

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Safety Data Sheet acc. to OSHA HCS

Printing date 11/06/2020 Reviewed on 05/08/2020

Product Name: METHANOL

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 If swallowed: Immediately call a poison center/doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed: Call a POISON CENTER or doctor/physician. P307+P311

P312 Call a poison center/doctor if you feel unwell.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

· Contact:

SPEX CertiPrep, LLC.

1-732-549-7144

· Date of preparation / last revision 11/06/2020 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health

TLV: Threshold Limit Value PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1