

Safety Data Sheet

Methanol Freeze Grade

1. Product and company identification

Product name : Methanol Freeze Grade
Material uses : Industrial applications: Solvent.
Internal code : OFS2906
System code : OFS2906
Date of issue/Date of revision : 2019-10-22
Date of previous issue : 2019-10-22
Version : 1.01
Supplier : Innospec Oilfield Services
 2600 Technology Forest Blvd
 The Woodlands, Texas 77381
Information contact : (713)-936-4340
e-mail address of person responsible for this SDS : sdsinfo@innospecinc.com

Emergency telephone number

In USA, Canada and North America, 24 hour / 7 day emergency information for our product is provided by the CHEMTREC® Emergency Call Center based in the USA

Country information : Emergency telephone number

USA, Canada, Puerto Rico, Virgin Islands : +1 800 424 9300
 In case of difficulties, or for ships at sea : +1 703 527 3887

In Europe, Middle East, Africa, Asia Pacific and South America 24 hour / 7 day emergency response for our products is provided by the NCEC CARECHEM 24 global network



The main regional centres are listed here in Section 1.

Other local contact numbers for specific language support in Asia Pacific are listed in Section 16

Country information	Emergency telephone number	Location
South America (all countries)	: +1 215 207 0061	Philadelphia USA
Brazil	: +55 11 3197 5891	Brazil
Mexico	: +52 555 004 8763	Mexico
Europe (all countries) Middle East, Africa (French, Portuguese, English)	: +44 (0) 1235 239 670	London, UK
Middle East, Africa (Arabic, French, English)	: +44 (0) 1235 239 671	Lebanon
Asia Pacific (all countries except China)	: +65 3158 1074	Singapore
China	: +86 10 5100 3039	Beijing China

Date of issue/Date of revision : 2019-10-22

1/15

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (dermal) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 EYE IRRITATION - Category 2A
 GERM CELL MUTAGENICITY - Category 1
 CARCINOGENICITY - Category 1B
 TOXIC TO REPRODUCTION (Unborn child) - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (eyes) - Category 1

GHS label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: H225 - Highly flammable liquid and vapor.
 H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled.
 H319 - Causes serious eye irritation.
 H340 - May cause genetic defects.
 H350 - May cause cancer.
 H361 - Suspected of damaging the unborn child.
 H370 - Causes damage to organs. (eyes)

Precautionary statements

Prevention

: P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 - Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
 P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P233 - Keep container tightly closed.
 P271 - Use only outdoors or in a well-ventilated area.
 P260 - Do not breathe vapor.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash hands thoroughly after handling.

Response

: P307 + P311 - IF exposed: Call a POISON CENTER or physician.
 P304 + P340 + P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
 P301 + P312 + P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
 P302 + P352 + P312 + P362+P364 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Take off contaminated clothing and wash it before reuse.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Section 2. Hazards identification

	P337 + P313 - If eye irritation persists: Get medical attention.
Storage	: P405 - Store locked up. P403 - Store in a well-ventilated place. P235 - Keep cool.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Avoid contact with skin and clothing. Wash thoroughly after handling.
Hazards not otherwise classified	: Prolonged or repeated contact may dry skin and cause irritation.
Target organs	: Contains material which causes damage to the following organs: blood, the reproductive system, liver, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea. Contains material which may cause damage to the following organs: kidneys, spleen, gastrointestinal tract.

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
ethanol; ethyl alcohol	30 - 60	64-17-5
methanol	15 - 30	67-56-1
propan-2-ol; isopropanol	0.99 - 4.99	67-63-0
Solvent naphtha (petroleum), light aliph.	0.09 - 0.99	64742-89-8
toluene	0.09 - 0.99	108-88-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Additional information

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Remove dentures if any. Wash out mouth with water. Stop if the exposed person feels sick as vomiting may be dangerous. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled.
- Skin contact** : Harmful in contact with skin. Defatting to the skin. May cause skin dryness and irritation.
- Ingestion** : Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 4. First aid measures

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Flash point** : Closed cup: 9.7°C (49.5°F)

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanol; ethyl alcohol	ACGIH TLV (United States, 3/2018). STEL: 1000 ppm, 0 times per shift, 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm, 0 times per shift, 8 hours. TWA: 1900 mg/m ³ , 0 times per shift, 8 hours. NIOSH REL (United States, 10/2016). TWA: 1000 ppm, 0 times per shift, 10 hours. TWA: 1900 mg/m ³ , 0 times per shift, 10 hours. OSHA PEL (United States, 5/2018). TWA: 1000 ppm, 0 times per shift, 8 hours. TWA: 1900 mg/m ³ , 0 times per shift, 8 hours.
methanol	ACGIH TLV (United States, 3/2018). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 262 mg/m ³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 328 mg/m ³ 15 minutes. OSHA PEL 1989 (United States, 3/1989). Absorbed through skin. TWA: 200 ppm 8 hours. TWA: 260 mg/m ³ 8 hours. STEL: 250 ppm 15 minutes.

Section 8. Exposure controls/personal protection

propan-2-ol; isopropanol	<p>STEL: 325 mg/m³ 15 minutes. NIOSH REL (United States, 10/2016). Absorbed through skin. TWA: 200 ppm 10 hours. TWA: 260 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes. OSHA PEL (United States, 5/2018). TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 3/2017). TWA: 200 ppm, 0 times per shift, 8 hours. STEL: 400 ppm, 0 times per shift, 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 400 ppm, 0 times per shift, 8 hours. TWA: 980 mg/m³, 0 times per shift, 8 hours. STEL: 500 ppm, 0 times per shift, 15 minutes. STEL: 1225 mg/m³, 0 times per shift, 15 minutes. NIOSH REL (United States, 10/2016). TWA: 400 ppm, 0 times per shift, 10 hours. TWA: 980 mg/m³, 0 times per shift, 10 hours. STEL: 500 ppm, 0 times per shift, 15 minutes. STEL: 1225 mg/m³, 0 times per shift, 15 minutes. OSHA PEL (United States, 6/2016). TWA: 400 ppm, 0 times per shift, 8 hours. TWA: 980 mg/m³, 0 times per shift, 8 hours.</p>
toluene	<p>OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm, 0 times per shift, 8 hours. TWA: 375 mg/m³, 0 times per shift, 8 hours. STEL: 150 ppm, 0 times per shift, 15 minutes. STEL: 560 mg/m³, 0 times per shift, 15 minutes. OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm, 0 times per shift, 8 hours. CEIL: 300 ppm, 0 times per shift, 0 hours. AMP: 500 ppm, 0 times per shift, 10 minutes. NIOSH REL (United States, 10/2016). TWA: 100 ppm, 0 times per shift, 10 hours. TWA: 375 mg/m³, 0 times per shift, 10 hours. STEL: 150 ppm, 0 times per shift, 15 minutes. STEL: 560 mg/m³, 0 times per shift, 15 minutes. ACGIH TLV (United States, 3/2018). TWA: 20 ppm, 0 times per shift, 8 hours.</p>

Appropriate engineering controls

- : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

- : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 8. Exposure controls/personal protection

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear. Colorless.
- Odor** : Alcohol-like.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point** : Lowest known value: 64.7°C (148.5°F) (methanol). Weighted average: 74.04°C (165.3°F)
- Flash point** : Closed cup: 9.7°C (49.5°F)
- Evaporation rate** : Highest known value: 2.1 (methanol) Weighted average: 1.83 compared with butyl acetate
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Greatest known range: Lower: 6% Upper: 44% (methanol)

Section 9. Physical and chemical properties

Vapor pressure	: Highest known value: 16.9 kPa (127 mm Hg) (at 20°C) (methanol). Weighted average: 9.29 kPa (69.68 mm Hg) (at 20°C)
Vapor density	: Highest known value: 2.07 (Air = 1) (isopropanol). Weighted average: 1.46 (Air = 1)
Specific gravity	: 0.806
Solubility	: Insoluble in the following materials: cold water, hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Lowest known value: 399°C (750.2°F) (isopropanol).
Decomposition temperature	: Not available.
Viscosity	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result	Dose
ethanol; ethyl alcohol	-	Rat	LC50 Inhalation Vapor	124700 mg/ 4 hours m ³
methanol	-	Rat	LD50 Intravenous	1440 mg/kg -
	-	Rat	LC50 Inhalation Gas.	145000 1 hours ppm
	-	Rat	LC50 Inhalation Gas.	64000 ppm 4 hours
	-	Rabbit	LD50 Dermal	15800 mg/ - kg
propan-2-ol; isopropanol toluene	-	Rat	LD50 Oral	5600 mg/kg -
	-	Rat	LD50 Oral	4700 mg/kg -
	-	Rat	LC50 Inhalation Vapor	26700 ppm 1 hours
	-	Rabbit	LD50 Dermal	>5000 mg/ - kg
	-	Rat	LD50 Oral	5000 mg/kg -

Potential chronic health effects

Not available.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Test	Species	Result
ethanol; ethyl alcohol	-	Rabbit	Eyes - Mild irritant -
	-	Rabbit	Eyes - Moderate irritant -
	-	Rabbit	Eyes - Severe irritant -
	-	Rabbit	Skin - Mild irritant -
	-	Rabbit	Skin - Moderate irritant -
propan-2-ol; isopropanol	-	Rabbit	Eyes - Moderate irritant -
	-	Rabbit	Eyes - Moderate irritant -
	-	Rabbit	Eyes - Severe irritant -
	-	Rabbit	Skin - Mild irritant -
	-	Rabbit	Skin - Moderate irritant -
toluene	-	Pig	Skin - Mild irritant -
	-	Rabbit	Skin - Moderate irritant -

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
ethanol; ethyl alcohol	-	1	-
propan-2-ol; isopropanol	-	3	-
toluene	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Product/ingredient name			Result	Dose
toluene	EPA 414 Prenatal Developmental Toxicity Study	Rat - Female	-	-

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
methanol	Category 1	Inhalation	eyes
propan-2-ol; isopropanol	Category 3	Not applicable.	Narcotic effects
toluene	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
toluene	Category 2	Not determined	central nervous system (CNS)

Aspiration hazard

Section 11. Toxicological information

Name	Result
Solvent naphtha (petroleum), light aliph. toluene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
ethanol; ethyl alcohol	Acute EC50 17.921 mg/l Marine water Acute LC50 25500 µg/l Marine water	Algae - Ulva pertusa Crustaceans - Artemia franciscana - Larvae	96 hours 48 hours
	Chronic NOEC 14 ppm Fresh water Chronic NOEC 100 µl/L Fresh water	Algae - Eutreptiella sp. Daphnia - Daphnia magna - Neonate	96 hours 21 days
	Chronic NOEC 0.375 µl/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
methanol	Acute EC50 16.912 mg/l Marine water Acute EC50 22200 to 23400 mg/l Fresh water Acute LC50 2500000 µg/l Marine water	Algae - Ulva pertusa Daphnia - Daphnia obtusa - Neonate Crustaceans - Crangon crangon - Adult	96 hours 48 hours 48 hours
	Acute LC50 100 mg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
propan-2-ol; isopropanol	Chronic NOEC 9.96 mg/l Marine water Acute EC50 10100 mg/l Fresh water Acute LC50 1400000 to 1950000 µg/l Marine water	Algae - Ulva pertusa Daphnia - Daphnia magna Crustaceans - Crangon crangon	96 hours 48 hours 48 hours
	Acute LC50 4200 mg/l Fresh water Acute LC50 6550 mg/l	Fish - Rasbora heteromorpha Fish	96 hours 96 hours
Solvent naphtha (petroleum), light aliph. toluene	Acute LC50 >100000 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6 mg/l Acute LC50 15.5 ppm Marine water	Daphnia Crustaceans - Palaemonetes pugio - Adult	48 hours 48 hours
	Acute LC50 5.8 mg/l Chronic NOEC 1000 µg/l Fresh water	Fish Daphnia - Daphnia magna	96 hours 21 days

Persistence and degradability

Product/ingredient name	Test	Result
methanol	OECD 301D Ready Biodegradability - Closed Bottle Test	99 % - 28 days

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
methanol	-	-	Readily
propan-2-ol; isopropanol	-	-	Readily
toluene	-	-	Readily

Bioaccumulative potential




Section 12. Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
ethanol; ethyl alcohol	-0.35	-	low
methanol	-0.77	<10	low
propan-2-ol; isopropanol	0.05	-	low
Solvent naphtha (petroleum), light aliph.	-	10 to 2500	high
toluene	2.65	90	low

Section 13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN1987	UN1987	UN1987
UN proper shipping name	Alcohols, n.o.s. RQ (methanol)	ALCOHOLS, N.O.S. (ethanol)	Alcohols, n.o.s. (ethanol)
Transport hazard class(es)	3 	3 	3 
Packing group	II	II	II
Environmental hazards	No.	No.	No.
Additional information	<p>Reportable quantity 20000 lbs / 9080 kg [2976 gal / 11265.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Exceptions: 4b, 150. Non-bulk: 202. Bulk: 242.</p>	<p>Emergency schedules F-E, S-D</p> <p>Special provisions 274</p>	<p>Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341.</p> <p>Special provisions A3, A180</p>

Section 14. Transport information

	Quantity limitation Passenger aircraft/rail: 5 L. Cargo aircraft: 60 L. Special provisions 172, IB2, T7, TP1, TP8, TP28		
--	--	--	--

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.
Clean Water Act (CWA) 307: toluene

Clean Air Act Section 112 : Listed

(b) Hazardous Air Pollutants (HAPs)

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
ethanol; ethyl alcohol	30 - 60	Yes.	No.	No.	Yes.	No.
methanol	15 - 30	Yes.	No.	No.	Yes.	No.
propan-2-ol; isopropanol	0.99 - 4.99	Yes.	No.	No.	Yes.	No.
Solvent naphtha (petroleum), light aliph.	0.09 - 0.99	Yes.	No.	No.	No.	Yes.
toluene	0.09 - 0.99	Yes.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	methanol isopropanol	67-56-1 67-63-0	15 - 30 0.99 - 4.99
Supplier notification	methanol isopropanol	67-56-1 67-63-0	15 - 30 0.99 - 4.99

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Date of issue/Date of revision : 2019-10-22

13/15

Section 15. Regulatory information

- Massachusetts** : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL; METHANOL; ISOPROPYL ALCOHOL; 2-PROPANOL
- New York** : The following components are listed: Methanol
- New Jersey** : The following components are listed: ETHYL ALCOHOL; ALCOHOL; METHYL ALCOHOL; METHANOL; ISOPROPYL ALCOHOL; 2-PROPANOL
- Pennsylvania** : The following components are listed: DENATURED ALCOHOL; ETHANOL; METHANOL; 2-PROPANOL
- California Prop. 65** : **WARNING:** This product can expose you to chemicals including methanol, toluene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level	Contains : % or ppm
methanol toluene	No. No.	Yes. Yes.			≥25 - <30 <1

International lists

National inventory

Australia inventory (AICS)

Canada inventory

China inventory (IECSC)

Europe inventory

Japan inventory (ENCS)

New Zealand Inventory of Chemicals (NZIoC)

Philippines inventory (PICCS)

Korea inventory (KECI)

Taiwan inventory (TCSI)

United States inventory (TSCA 8b)

- : All components are listed or exempted.
- : All components are listed or exempted.
- : All components are listed or exempted.
- : All components are listed or exempted.
- : **Japan inventory (ENCS):** Not determined.
Japan inventory (ISHL): Not determined.
- : All components are listed or exempted.
- : All components are listed or exempted.
- : All components are listed or exempted.
- : All components are listed or exempted.
- : All components are listed or exempted.

Our REACH (pre-) registrations DO NOT cover the following:

1. The manufacture of these products by our company outside the EU unless covered by the Only Representative provisions, and
 2. The importation of these products into Europe by other companies. Re-importation by other companies is not covered by our (pre-) registrations
- Customers and other third parties importing and/or re-importing our products into Europe will need either:
- Their own (pre-) registration for substances contained in the imported product, or constituent monomers (imported above 1 tonne per year and >2% by weight) in the case of imported polymers, or
 - In the case of importation only, to make use of the "Only Representative" provisions, if available.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		3
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Date of issue/Date of revision : 2019-10-22

14/15

Section 16. Other information

National Fire Protection Association (U.S.A.)



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing	: 2019-10-22
Date of issue/Date of revision	: 2019-10-22
Date of previous issue	: 2019-10-22
Version	: 1.01
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.