SAFETY DATA SHEET

This Safety Data Sheet (SDS) complies with the United Nations Globally Harmonized System (GHS) of Classification and Labeling.

1. Product and Supplier Identification

Product Name: Methanol
GHS Product Identifier: Methanol
CAS Number: 67-56-1
REACH Registration Number: 01-2119433307-44-0031: 01-2119433307-44-0030, for access to the REACH SDS please access it via www.methanex.com

Recommended Use: Solvent, fuel, feedstock

Restrictions on Use: Do not use in a confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. Avoid use near heat, flames, sparks, and other sources of ignition.

Product: **Synonyms:**	**Methanol (CH_3OH)** Methanol, methyl hydrate, wood spirit, methyl hydroxide	**EMERGENCY NUMBERS**
Company Identification:	**Methanex Asia Pacific** **Unit 3117 Two Pacific Place,** **88 Queensway,** **Admiralty,** **Hong Kong** **Tel. #: (852)-2918-1398**	**CHEMTREC Emergency Tel. #:** **61-290372994** (Australia) Please also see emergency contacts of your local Australian supplier / distributor.

2. Hazards Identification

Classification*:

Acute Toxicity (Inhalation)	Category 2
Acute Toxicity (Oral, Dermal)	Category 3
Eye Damage/Irritation	Category 1
Skin Corrosion/Irritation	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1B
Toxic to Reproduction	Category 2
Specific Target Organ Toxicity (Repeated Exposure)	Category 2
Flammable Liquid	Category 2
Toxic to the Aquatic Environment-Acute Hazard	Category 2

* GHS Classification as determined by OSHA, 2011

Label:

GHS02 **GHS06** **GHS08**

Hazard Communication:
DANGER! Highly flammable liquid and vapour. Fatal if inhaled. Toxic if swallowed. Toxic in contact with skin. Causes serious eye damage. May be fatal if swallowed.

WARNING! May cause damage to central nervous system through prolonged or repeated exposure.

Hazards and Precautions:
Colourless liquid, with a mild, characteristic alcohol odour when pure. Crude methanol may have a repulsive, pungent odour. Hygroscopic (moisture absorbing).

Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapours/spray. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

***FLAMMABLE LIQUID AND VAPOUR*:** Burns with a clean, clear flame, which is almost invisible in daylight, or a light blue flame. Can decompose at high temperatures forming carbon monoxide and formaldehyde. Confined space toxicity hazard. Mild central nervous system depressant following inhalation, skin absorption or ingestion. May cause headache, nausea, dizziness, drowsiness, and un-coordination. Severe vision effects, including increased sensitivity to light, blurred vision, and blindness may develop following an 8-24 hour symptom-free period. Coma and death may result.

IRRITANT: Causes eye irritation. Aspiration hazard. Swallowing or vomiting of the liquid may result in aspiration (breathing) into the lungs.

POSSIBLE REPRODUCTIVE HAZARD: May cause fetotoxic (toxic to the fetus during the latter stages of pregnancy, often through the placenta) and teratogenic effects (causing malformations of the fetus), based on animal information.

NFPA Ratings (Health, Fire, Reactivity): 1, 3, 0

3. Composition

Component	% (w/w)	Exposure Limits (ACGIH)*	LD_{50}	LC_{50}
Methanol (CAS 67-56-1)	99-100	ACGIH* TLV-TWA: 200 ppm, skin TLV-STEL: 250 ppm, skin PEL-TWA: 200 ppm, skin PEL-STEL: 250 ppm, skin IDLH: 6000 ppm, acute inhalation toxicity to animals TLV Basis, critical effects: neuropathy, vision, central nervous system(CNS)	5628 mg/kg (oral/rat) 15800 mg/kg (dermal/ rabbit)	64000 ppm (inhalation/rat)

*ACGIH, American Conference of Governmental Industrial Hygienists.

Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

4. First Aid Measures

Suitable First Aid Actions	
Eye Contact	Remove contact lenses if present and easy to do so. In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes, lifting the upper and lower eyelids occasionally. Obtain medical attention.
Skin Contact	If in skin or hair, remove immediately all contaminated clothing. Rinse skin with water/shower. In case of contact, remove contaminated clothing. In a shower, wash affected areas with soap and water for at least 15 minutes. Seek medical attention if irritation occurs or persists. Wash contaminated clothing before reuse. Prolonged contact with methanol may defat skin tissue, resulting in drying and cracking.
Inhalation	If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor. Specific treatment is urgent (see note to physician).
Ingestion	If swallowed immediately call a POISON CENTRE or doctor. Rinse mouth. Swallowing methanol is potentially life threatening. Onset of symptoms may be delayed for 18 to 24 hours after digestion. If conscious and medical aid is not immediately available, do not induce vomiting. In actual or suspected cases of ingestion, transport to medical facility immediately. (See note to physician)

Note: *Emergency assistance may also be available from the local poison control centre.*

NOTE TO PHYSICIAN: Acute exposure to methanol, either through ingestion or breathing high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours after exposure. Symptoms and signs are usually limited to the Central Nervous System (CNS), eyes and gastrointestinal tract. Because of the initial CNS's effects of headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within two hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended.

Ethanol significantly decreases the toxicity of methanol because it competes for the same metabolic enzymes, and has been used to treat methanol poisoning.

5. Fire Fighting Measures

Suitable Extinguishing Media:	
	Extinguishment Media Use
Small Fire	Dry chemical, CO_2, water spray
Large Fire	AFFF(R) (Aqueous Film Forming Foam (alcohol resistant)) type with either a 3% or 6% foam proportioning system, Water spray (see note in Unsuitable Extinguishing Media).

Unsuitable Extinguishing Media	
Foam	General purpose synthetic foams or protein foams.
Water	Water may be effective for cooling, but may not be effective for extinguishing a fire because it may not cool methanol below its flash point.

Specific Hazards	
Heat	Methanol vapours may burn with an invisible flame or clean clear flame that is almost invisible in daylight.
Products of Combustion	During a fire, toxic gases and vapours, carbon monoxide, carbon dioxide, formaldehyde may be generated.
Vapours	Vapours can accumulate in confined spaces resulting in a toxicity and flammability hazard. Vapours can flow along surfaces to distant ignition sources and flash back
Solutions	Concentrations of greater that 25% methanol in water can be ignited.
Closed Containers	Closed containers may rupture violently and suddenly release large quantities of methanol when exposed to fire or excessive heat for a sufficient period of time.
Fire/Explosion	Vapours are slightly heavier than air and may travel long distances toward sources of ignition.

Fire Fighting Instructions: Stay upwind and uphill. Isolate and restrict area access. Use fine water spray or fog to control fire spread and cool adjacent structures or containers. Contain fire control water for later disposal. Fire fighters must wear full face, positive pressure, self-contained breathing apparatus or airline and appropriate protective fire fighting clothing as per NFPA. Note that methanol fires may require proximity suits. Take care not to walk through any spilled chemical.

6. Accidental Release Measures

Overview: Flammable liquid! Can burn without a visible flame. Release can cause an immediate risk of fire and explosion. Eliminate all ignition sources, stop leak and use absorbent materials. If necessary, contain spill by diking. Fluorocarbon alcohol resistant foams may be applied to spill to diminish vapour and fire hazard. Maximize methanol recovery for recycling or re-use. Restrict access to area until completion of cleanup. Ensure cleanup is conducted by trained personnel only. Wear adequate personal protection and remove all sources of ignition. Notify all governmental agencies as required by law.

Precautions	
Personal Protection	Full face, positive pressure self-contained breathing apparatus or airline, and fire resistant protective clothing with chemical resistant splash suit must be worn. If product ignites, approach and fire fighting must be done with appropriate fire fighting clothing.
Environmental Precautions	Biodegrades easily in water. Methanol in fresh or salt water may have serious effects on aquatic life. A study on methanol's toxic efffects on sewage sludge bacteria reported little effect on digestion at 0.1% while 0.5% methanol retarded digestion. Methanol will be broken down to carbon dioxide and water.
Remedial Measures	Flammable liquid – release/loss of primary containment can cause an immediate fire/explosion hazard. Eliminate all sources of ignition, stop leak and use absorbent materials. Collect liquid with explosion proof pumps. Do not walk through spill product as it may be on fire and not visible.
Small Spills	Soak up spill with non-combustible absorbent material. Recover methanol and dilute with water to reduce fire hazard. Prevent spilled methanol from entering sewers, confined spaces, drains, or waterways. Restrict access to unprotected personnel. Put material in suitable, covered, labeled containers. Flush area with water.
Large Spills	If necessary, contain spill by diking. Alcohol resistant foams may be applied to spill to diminish vapour and fire hazard. Maximize methanol recovery for recycling or reuse. Collect liquid with explosion proof pumps.

Methods and materials for containment and cleaning up

Remove all sources of ignition. Use non-sparking tools. Prevent further leakage or spillage if safe to do so. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

7. Handling and Storage

Precautions for Handling: No smoking or open flame in storage, use or handling areas. Use explosion proof electrical equipment. Ensure proper electrical grounding procedures are in place.

Storage: Store in totally enclosed equipment, designed to avoid ignition and human contact	
Tanks	Tanks must be grounded, vented, and should have vapour emission controls. Tanks must be diked as per NFPA or API Standards. A flammable mixture of methanol vapour and air is possible inside a storage tank or transportation tank, and handlers should take appropriate precautions to reduce the risk of ignition. Handlers must eliminate ignition sources or purge the tank with an inert gas such as nitrogen. All equipment must be grounded - bonded when transferring product in order to avoid static discharge from the equipment, and subsequent possible fire.
Incompatible Materials	Avoid storage with incompatible materials. Anhydrous methanol is non-corrosive to most metals at ambient temperatures except for lead, nickel, monel, cast iron and high silicon iron. Coatings of copper (or copper alloys), zinc (including galvanized steel), or aluminum are unsuitable for storage. These materials may be attacked slowly by the methanol. Storage tanks of welded construction are normally satisfactory.
Design	Containers should be designed and built in conformance with good engineering practice for the material being stored. While plastics can be used for short term storage, they are generally not recommended for long-term storage due to deterioration effects and the subsequent risk of contamination.

Corrosion rates for several construction materials:

Material	Corrosion Rate
Cast iron, monel, lead, nickel	<0.508 mm/year
High silicon iron	<0.051 mm/year
Polyethylene	Some attack
Neoprene, phenolic resins, polyesters, natural rubber, butyl rubber	Satisfactory
Polyvinyl chloride, unplasticized	Resistant

8. Exposure Controls, Personal Protection

Exposure Parameters:

ACGIH* TLV-TWA:	200 ppm, skin (262 mg/m^3)
TLV-STEL	250 ppm, skin (328 mg/m^3)
PEL-TWA	200 ppm, skin
PEL-STEL	250 ppm, skin
IDLH	6000 ppm, acute inhalation toxicity to animals
TLV Basis	critical effects: neuropathy, vision, central nervous system (CNS)

Exposure Controls

Engineering Controls	In confined areas, local and general ventilation should be provided to maintain airborne concentrations below permissable exposure limits. Ventilation systems must be designed according to approved engineering standards.
Respiratory Protection	Refer to NIOSH/OSHA recommendations for methanol concentrations in air. **Cartridge type respirators are NOT recommended.** *Emergency or Planned entry into unkown concentrations:* Respirator selection must be done by a qualified person and be based upon a risk assessment of the work activities and exposure levels. Respirator users must be fit tested and clean shaven where the respirator seals to the face. Exposure must be kept at or below the applicable exposure limits and the maximum use concentration of the respirator must not be exceeded. Positive pressure, full-facepiece self-contained breathing apparatus; or Positive pressure, full-facepiece supplied air respirator with an auxiliary positive pressure self-contained breathing apparatus should be considered.
Skin Protection	Polyvinyl alcohol, Butyl and nitrile rubbers are recommended for gloves. Check with manufacturer. Wear chemical resistant pants and jackets, preferably of butyl or nitrile rubber. Check with manufacturer.
Eye and Face Protection	Face shield and chemical splash goggles when transferring is taking place. Contact lenses should not be worn when working with methanol.
Footwear	Chemical resistant and as specified by the workplace.

Environmental Exposure Controls: Do not flush into surface water or sanitary sewer system.

Other: Eyewash and showers should be located near work areas. NOTE: PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean, fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

Careful consideration must be made of the added danger of the concentration being in the LEL/UEL range and so there may be a fire/explosion hazard.

9. Physical and Chemical Properties

Appearance: Liquid, clear, colourless
Odour: Mild characteristic alcohol odour
Odour Threshold: detection: 4.2 - 5960 ppm
(geometric mean) 160 ppm
recognition: 53 – 8940 ppm
(geometric mean) 690 ppm
pH: Not applicable
Freezing Point: -97.8°C
Boiling Point: 64.7°C
Boiling Range: Not determined
Flash Point: 11.0°C
Solubility: Completely soluble
Partial Coefficient: Log P (oct) = -0.82
Vapour Pressure: 12.8 kPa @ 20°C
Viscosity: 0.3 cP@ 25°C

Upper Explosive Limit (UEL): 36.5 %
Lower Explosive Limit (LEL): 6%
Auto Ignition Temperature: 464°C
Solvent Solubility: Soluble in all proportions in ethanol, benzene, other alcohols, chloroform, diethyl ether, other ethers, esters, ketones and most organic solvents
Critical Temperature: 239.4°C
Specific Gravity: 0.82 @ 20°C
Evaporation Rate: 4.1 (n-butyl acetate =1)
Vapour Density: 1.105 @ 15°C (air = 1)
Decomposition Temperature: Not determined
Sensitivity to Impact: No
Sensitivity to Static Charge: Low
Percent Volatility: 100

10. Stability and Reactivity

Chemical Stability: Stable as supplied.

Hazardous Reactions	Avoid contact with strong oxidizers, strong mineral or organic acids, and strong bases. Contact with these materials may cause a violent or explosive reaction.
Conditions to Avoid	Avoid contact with sparks, heat, open flame, or ignition sources.
Incompatibility	Avoid contact with strong oxidizers, strong mineral or organic acids, and strong bases. Contact with these materials may cause a violent or explosive reaction. May be corrosive to lead, aluminum, magnesium, and platinum. May react with metallic aluminum or magnesium and generate hydrogen gas. May attack some forms of plastic, rubber, and coatings.
Hazardous Decomposition Products	Formaldehyde, carbon oxides

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Acute toxicity Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.

Methanol (67-56-1)	
ATE (oral)	100000 mg/kg
ATE (dermal)	300000 mg/kg

LD50/oral/rat	1187- 2769 mg/kg
LD50/dermal/rabbit	17000 mg/kg
LC50/inhalation/4h/rat	1282 mg/l/4h

Primary Routes of Entry:

Skin Contact:	Yes
Skin Absorption:	Yes
Eye Contact:	Yes
Ingestion:	Yes
Inhalation:	Yes

Emergency Overview: Colourless liquid, with a mild, characteristic alcohol odour when pure. Crude methanol may have a repulsive, pungent odour. Hygroscopic. Can decompose at high temperatures forming carbon monoxide and formaldehyde. Confined space toxicity hazard. Mild central nervous system depressant following inhalation, skin absorption or ingestion. May cause headache, nausea, dizziness, drowsiness, and incoordination. Severe vision effects, including increased sensitivity to light, blurred vision, and blindness may develop following an 8-24 hour symptom-free period. Coma and death may result. Causes eye irritation. Aspiration hazard. Swallowing or vomiting of the liquid may result in aspiration (breathing) into the lungs. May cause fetotoxic (toxic to the fetus during the latter stages of pregnancy, often through the placenta) and teratogenic effects (causing malformations of the fetus), based on animal information.

Acute Exposure:

Inhalation	Inhalation of high airborne concentrations can also irriate mucous membranes, cause headaches, sleepiness, nausea, confusion, loss of consciousness, digestive and visual disturbances and even death. NOTE: Odour threshhold of methanol is several times higher than the TLV-TWA. Depending upon severity of poisoning and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects. Concentrations in air exceeding 1000 ppm may cause irritation of the mucous membranes.
Skin Contact	Methanol is moderately irritating to the skin. Methanol can be absorbed through the skin and harmful effects have been reported by this route of entry. Effects are similar to those described in “Inhalation”.
Eye Contact	Methanol is a mild to moderate eye irritant. High vapour concentration or liquid contact with eyes causes irritation, tearing and burning.
Ingestion	Swallowing even small amounts of methanol could potentially cause blindness or death. Effects of sub lethal doses may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity.

Chronic Exposure:

Irritancy	Prolonged contact with skin may defat tissue causing dermititis or aggravate existing skin problems.
Sensitization	None reported
Carcinogenicity	Not listed by IARC, NTP, ACGIH, or OSHA as a carcinogen.
Teratogenicity	Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations of methanol vapours.
Reproductive Toxicity	Information available does not suggest that methanol is a reproductive toxin.
Mutagenicity	There is insufficient information available to conclude that methanol is mutagenic.
Synergistic Products	In animals, high concentrations of methanol can increase the toxicity of other chemicals, particularly liver toxins like carbon tetrachloride. Ethanol significantly reduces the toxicity of methanol because it competes for the same metabolic enzymes, and has been usd to treat methanol poisoning.
Potential for Accumulation	Methanol is readily absorbed into the body following inhalation and ingestion. Skin absorption may occur if the skin is broken or exposure is prolonged. Once absorbed, methanol is rapidly distributed to body tissues. A small amount is excreted unchanged in exhaled air and the urine. The rest is first metabolized to formaldehyde, which is then metabolized to formic acid and/or formate. The formic acid and formate are eventually converted to carbon dioxide and water. In humans, methanol clears from the body, after inhalation or oral exposure, with a half-life of 1 day or more for high doses (greater than 1000 mg/kg) or about 1.5-3 hours for low doses (less than 100 mg/kg or 76.5-230 ppm (100-300 mg/m^3).
Medical Conditions Aggravated By Exposure	Persons with pre-existing skin disorders, eye problems, respiratory conditions, or impaired liver or kidney functions may be more susceptible to the effects of this substance.

12. Ecological Information

Environmental toxicity: DO NOT discharge into sewer or waterways.

Component	**Methanol (CAS 67-56-1)**
LC50/96h/fish	15400 -29400 mg/l
EC50/48h/daphnia	> 10000 mg/
IC50/72h/algae	ca. 22000 mg/l Selenastrum carpricornutum (*Pseudokichnerela subcapitata*)

Persistence and degradability	Readily biodegradable
Bioaccumulation	Does not bioaccumulate. Partition coefficient: n-octanol/water 0.77
Mobility in Soil	Mobile in soils
PBT/vPvB	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).
Terrestial Fate	The mobility of methanol in the subsurface will not be significantly limited by adsorption. Sorption of methanol to organic carbon in soil will be minor, and methanol will tend to remain in soil pore water.
Aquatic Fate	Methanol is completely miscible with water. Accordingly, its mobility in the subsurface will not be limited by solubility. Methanol has been shown to undergo rapid biodegradation in a variety of screening studies using sewage seed and activated sludge inoculum, which suggests that biodegradation will occur in aquatic environments where the concentration does not inhibit bacterial activity.
Atmoshere Fate	Methanol has a vapor pressure of 127 mm Hg at 25°C and is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase methanol is degraded in the atmosphere by reaction with photo chemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 17 days.
Other Adverse Affects	Do not flush into surface water or sanitary sewer system.

13. Disposal Considerations

Review federal, provincial or state, and local government requirements prior to disposal. Store material for disposal as indicated in Section #7, ***Handling and Storage***. Disposal by controlled incineration or by secure land fill may be acceptable.

Recycle wherever possible. Large volumes may be suitable for re-distillation or, if contaminated, incinerated. Can be disposed of in a sewage treatment facility. Methanol levels of up to 0.1% act as a food source for bacteria; above this level may be toxic to bacteria. When pumping through sewage collection systems, the level of methanol should be kept below the flammable range (a 25% methanol/water mixture is non-flammable at temperatures below 39°C). 1 ppm of methanol is equivalent to 1.5 ppm BOD loading in the sewage plant.

Container disposal:

Empty containers may contain hazardous residue. Return to supplier for reuse if possible. Never weld, cut or grind empty containers. If disposing of containers, ensure they are well rinsed with water, then disposed of at an authorised landfill. After cleaning, all existing labels should be removed.

14. Transport Information

Australian Dangerous Goods Code (ADG Code) :

UN Number: 1230
Shipping Name : Methanol
DG Class : 3 Subsidiary Risk : 6.1
Packing Group : II
Hazchem Code : 2WE
EPG # : 3A3
IRPG # : 16
Packaging Method : 3.8.3RT1

International Air Transport Association (IATA):

UN Number: UN1230
Proper Shipping Name: Methanol
Hazard Class: 3(6.1)
Packing Group: II
Labels required: Flammable Liquid and Toxic (Toxic label may be eliminated under SP 104)

International Maritime Organization (IMO):

UN Number: UN1230
Proper Shipping Name: Methanol
Hazard Class: 3(6.1)
Packing Group: II
Labels required: Flammable Liquid and Toxic
Flash Point = 11°C
EmS No. F-E, S-D
Stowage Category “B”, Clear of living quarters

Marine Pollutant: No

Labels : 3 - Flammable liquid
6.1 - Toxic substance

Orange plate :

15. Regulatory Information

Australian Inventory of Chemical Substances (AICS): Yes

Classification: F; R11
T; R23/24, R39/23/24/25

Labelling: F; T; R11, R23/24/25, R39/23/24/25
S (1/2), S7,16,36/37, 45

National Pollutant Inventory (NPI): Yes, Threshold Category 1, 10 tonnes per year

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP): Yes

Classification: Schedule 6 (S6) - Poison

16. Other Information

References:

1. International Programme on Chemical Safety, Methanol, Environmental Health Criteria, World Health Organization 1997.
2. Patty's Industrial Hygiene and Toxicology, 5th Edition.
3. Fire Protection Guide to Hazardous Materials, 13th Edition.
4. Lanigan, S., Final report on the Safety Assessment of Methyl Alcohol, International Journal of Toxicology., Volume 20, Supplement 1 (2001).
5. Forsberg, K., Quick Selection Guide to Chemical Protective Clothing.
6. Nelson, B.K., Teratological assessment of Methanol and Ethanol at high inhalation levels in rats, Fundamental and Applied Toxicology, Volume 5.
7. NIOSH Guide to Chemical Hazards
8. Hazardous Substance Data Base (HSDB).
9. Cheminfo.

Original Preparation Date: September 22, 2005

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Disclaimer: The information above is believed to be accurate and represents the best information currently available to us. Users should make their own investigations to determine the suitability of the information for their particular purposes. This document is intended as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

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