



Material Safety Data Sheet

LA4314

Methanol Inhib 1% (1% CRW9152)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA4314

Product Name: Methanol Inhib 1% (1% CRW9152)

Synonyms: None

Chemical Family: Alcohol

Application: Solvent, fuel, feedstock

Distributed By:

Univar Canada Ltd.
9800 Van Horne Way
Richmond, BC
V6X 1W5

Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.

Preparation date of MSDS: 04/22/2004

Telephone number of preparer: 1-866-686-4827

24-Hour Emergency Telephone Number (CHEMTREC): (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Methanol 67-56-1	>99	Dermal LD50 (Rabbit) 15800 mg/kg Oral LD50 (Rat) 5628 mg/kg Inhalation LC50 (Rat) >32,000 ppm / 8hrs Oral LD50 (Mouse) 7300 mg/kg
Isopropyl alcohol 67-63-0	0.1-1.0	Dermal LD50 (Rabbit) 12800 mg/kg Inhalation LC50 (Rat) 12000 ppm/8H Oral LD50 (Mouse) 3600 mg/kg Oral LD50 (Rat) 5045 mg/kg

Notes: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Moderate Irritation. High vapor concentration or liquid contact with eyes causes irritation, tearing and burning.

Skin Contact: May be absorbed through the skin in toxic or lethal amounts.

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Inhalation: Inhalation of high airborne concentrations can irritate mucous membranes, cause headaches, sleepiness, nausea, confusion, loss of consciousness, digestive and visual disturbances and death.

Ingestion: May be fatal or cause blindness if swallowed.

4. FIRST AID MEASURES

Eye Contact: Flush immediately with gentle running water for a minimum of 15 minutes, ensuring all surfaces and crevices are flushed by lifting lower and upper lids. Obtain medical attention.

Skin Contact: Remove contaminated clothing and discard. In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention.

Inhalation: Remove to fresh air, restore or assist breathing if necessary, obtain medical attention immediately.

Ingestion: Swallowing methanol is life threatening. Onset of symptoms may be delayed for 18 to 24 hours after ingestion. If conscious and medical aid is not immediately available, do not induce vomiting. Seek immediate medical attention.

Notes 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 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 hospital is recommended.

5. FIRE FIGHTING MEASURES

Flash Point: 11 °C / 52 °F

Flash Point Method: Tag Closed Cup

Autoignition Temperature: 385 °C / 725 °F

Flammable Limits in Air (%): Lower: 6 Upper: 36

Extinguishing Media: Dry chemical. Carbon dioxide. Alcohol foam Water spray.

Special Exposure Hazards: Flammable Liquid. Methanol burns with a clean clear flame that is almost invisible in daylight. Stay upwind. Isolate and restrict area access. Concentrations of greater than 25% methanol in water can be ignited. Use fine water spray or fog to control fire spread and cool adjacent structures or containers. Contain fire control water for later disposal.

Special Protective Equipment: Fire fighters must wear full face, positive pressure, self-contained breathing apparatus and appropriate protective clothing. Protective fire fighting structural clothing is not effective protection from methanol. Do not walk through spilled product.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 3, REACTIVITY 0

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 1, FLAMMABILITY 3, REACTIVITY 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Restrict access to unprotected personnel. Full-face, positive pressure self-contained breathing apparatus or airline and protective clothing must be worn. Do not walk through spilled product as it may be on fire and not visible.

Environmental Precautionary Measures: Prevent from entering sewers, waterways or low areas. Consult local authorities.

Procedure for Clean Up: Flammable liquid. Release can cause an immediate fire/explosion hazard. Eliminate all ignition sources. Stop leak. Use absorbent materials. Contain spill by diking. Fluorocarbon alcohol resistant foams may be applied to spill to diminish vapour and fire hazard. Maximize recovery for recycling or reuse. Collect liquid with explosion proof pumps. For small spills, collect with non-combustible absorbent. Prevent spilled material from entering sewers, confined spaces, drains, or waterways. Do not walk through spilled product as it may be on fire and not visible.

7. HANDLING AND STORAGE

Handling: Flammable. For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Launder contaminated clothing prior to reuse. Protect against physical damage. Use appropriate personnel protective equipment. Wash thoroughly after handling. Use explosion proof electrical equipment.

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Storage: Tanks must be grounded and vented and should have vapour emission controls. Tanks must be diked. Avoid storage with incompatible materials. Anhydrous methanol is non-corrosive to most metals at ambient temperatures except lead and magnesium. However coatings of copper (or copper alloys), zinc (including galvanized steel) or aluminium are unsuitable for storage as they are attacked slowly. Mild steel is the recommended construction material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: In confined areas, local and general ventilation should be provided to maintain airborne concentrations below permissible exposure limits. Ventilation systems must be designed according to approved engineering standards.

Respiratory Protection: NIOSH approved supplied air respirator when airborne concentrations exceed exposure limits.

Gloves: Butyl rubber gloves. Nitrile gloves.

Skin Protection: Wear chemical resistant pants and jackets, preferably butyl or nitrile rubber.

Eyes: Face shield. Monogoggles.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location. Chemical resistant footwear.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Methanol	200 ppm TWA (Skin) 250 ppm STEL (Skin)	200 ppm TWA (Skin) 250 ppm STEL (Skin) 260 mg/m ³ TWA (Skin) 325 mg/m ³ STEL (Skin)	6000 ppm
Isopropyl alcohol	400 ppm STEL 200 ppm TWA	1225 mg/m ³ STEL 400 ppm TWA 500 ppm STEL 980 mg/m ³ TWA	2000 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Clear/ Colorless

Odor: Alcohol

pH Not applicable.

Specific Gravity: 0.792

Boiling Point: 64.5 °C / 148 °F

Freezing/Melting Point: -97.8 °C / -144 °F

Vapor Pressure: 96 mm Hg

Vapor Density: 1.105

% Volatile by Volume: 100

Evaporation Rate: 2.1

Solubility: Soluble.

VOCs (lbs/gallon): Not Available.

Viscosity: Not Available.

Molecular Weight: Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Incompatible materials. Avoid any source of ignition.

Materials to Avoid: Strong oxidizers. Strong acids. Strong bases. May be corrosive to lead and aluminium.

Hazardous Decomposition Products: Formaldehyde. Carbon dioxide. Carbon monoxide.

Additional Information: No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: May be fatal or cause blindness if swallowed.

Skin Contact: May be absorbed through the skin in toxic or lethal amounts.

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Inhalation: Inhalation of high airborne concentrations can irritate mucous membranes, cause headaches, sleepiness, nausea, confusion, loss of consciousness, digestive and visual disturbances and death.

Eye Contact: Moderate Irritation. High vapor concentration or liquid contact with eyes causes irritation, tearing and burning.

Additional Information: Effects of sub lethal doses may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Long term exposure to methanol has been associated with headaches, giddiness, conjunctivitis, insomnia and impaired vision. Chronic exposure to isopropanol vapours has produced testicular effects (seminiferous tubule atrophy) in experimental animals. The effects in animals from single exposure by inhalation include decreased activity, anesthesia, and microscopic and morphologic changes of the epithelial cells of the nose and middle ear mucosa. Repeated exposures resulted in narcosis, incoordination, changes in motor activity, and fatty degeneration of the liver. Single dermal application of a 70% solution showed significant skin absorption. Repeated dermal exposure caused dryness, decreased skin tone, slight redness, peeling, and cracked skin, weight changes, and increased lung weights. Long term dermal applications of a 50% solution to the face of rats resulted in no adverse effects. Toxicity described in animals from a single ingestion of near lethal doses include incoordination decreased activity, gastrointestinal tract irritation, changes in the appearance of the stomach, lungs, kidneys, and thymus, and symptoms associated with anesthesia. Repeated administration of approximately 6 g/kg in rats demonstrated no effects on growth of liver weights. Long term administration caused sluggishness, and effects on body weight gain and growth. Dogs administered 1,300 mg/kg exhibited signs of drunkenness.

Acute Test of Product:

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Methanol	Not listed.	Not listed.
Isopropyl alcohol	Group 3	A4 : Not classifiable for human and animals.

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: Evidence of mutagenicity has been found for isopropanol. Evidence of reproductive toxicity has been found for isopropanol. Oral administration of the isopropyl alcohol produced fetotoxic effects in rats at levels that were maternally toxic and developmental effects at levels that were maternally non-toxic. Inhalation exposure to rats has produced developmental effects at maternally toxic doses and reduced fetotoxicity at non-maternally toxic levels. Methanol is reported to cause birth defects in rats exposed to 20 000 ppm. In experimental animals, methanol is fetotoxic, teratogenic and has produced significant behavioral abnormalities in offspring at dose levels not producing maternal toxic effects. Behavioural abnormalities were observed in the offspring of rats given drinking water containing 2% methanol. Methanol has produced mutagenic effects (somatic cells) in experimental animals.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Methanol	LC50 (rainbow trout (fingerling)) 13 mg/L LC50 (fathead minnow (28 days old)) 29400 mg/L LC50 (trout) 8000 mg/L	Not Available.	Not Available.
Isopropyl alcohol	LC50 (fathead minnow (31 days old)) 61200 mg/L LC50 (fathead minnow (29 days old)) 94900 mg/L	Not Available.	Not Available.

Other Information:

Methanol in fresh or salty water may have serious effects on aquatic life. A study on methanol's toxic effects on sewage sludge bacteria reported little effect on digestion at 1.0 % while 0.5% methanol retarded digestion. Methanol will be broken down to carbon dioxide and water.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Incineration is the recommended disposal method. Biological treatment may be used on dilute aqueous waste methanol. Methanol wastes are not suitable for underground injection. Waste materials must be disposed of in accordance with your municipal, state, provincial and federal regulations.

Contaminated Packaging: Waste materials must be disposed of in accordance with your municipal, state, provincial and federal regulations.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Flammable Liquid, Toxic, n.o.s. (Methanol)

DOT Hazardous Class 3 (6.1)

DOT UN Number: UN1992

DOT Packing Group: II

DOT Reportable Quantity (lbs): 5000

Notes: No additional remark.

Marine Pollutant: No.

ICAO/IATA:

IATA Proper Shipping Name: Flammable Liquid, Toxic, n.o.s. (Methanol)

IATA Hazard Class: 3 (6.1)

UN Number: UN1992

Packing Group: II

IATA Label: Flammable liquid. Toxic.

IATA Remarks: No additional remark.

IMDG:

IMDG Proper Shipping Name: Flammable Liquid, Toxic, n.o.s. (Methanol)

Hazard Class: 3 (6.1)

UN Number: UN1992

Packing Group: II

Marine Pollutant: No.

IMDG Label: Flammable. Toxic.

Remarks: No additional remark.

TDG (Canada):

TDG Proper Shipping Name: Flammable Liquid, Toxic, N.O.S. (Methanol)

Hazard Class: 3 (6.1)

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UN Number: UN1992
Packing Group: II
Note: No additional remark.
Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Methanol	Not Listed.	LISTED	LISTED
Isopropyl alcohol	Not Listed.	Not Listed.	LISTED

California Proposition 65: Not Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List: Listed.

Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:

B2 FLAMMABLE LIQUIDS

D1B TOXIC MATERIALS

D2A VERY TOXIC MATERIALS

D2B TOXIC MATERIALS



16. OTHER INFORMATION

Additional Information:

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Disclaimer:

NOTICE TO READER:

Univar, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar Sales Office.

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*****END OF MSDS*****