



MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards. This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard (29 CFR 1910.1200). Other government regulations must be reviewed for applicability to these products.

WARNING: PRODUCT COMPONENTS PRESENT HEALTH AND SAFETY HAZARDS. READ AND UNDERSTAND THIS MATERIAL SAFETY DATA SHEET (M.S.D.S.). ALSO, FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES. This product may contain Chromium and/or Nickel which are listed by OSHA, NTP, or IARC as being a carcinogen or potential carcinogen. Use of this product may expose you or others to fumes and gases at levels exceeding those established by the American Conference of Governmental Industrial Hygienists (ACGIH) or the Occupational Safety and Health Administration (OSHA) **The information contained herein relates only to the specific product. If the product is combined with other materials, all component properties must be considered.** BE SURE TO CONSULT THE LATEST VERSION OF THE MSDS. MATERIAL SAFETY DATA SHEETS ARE AVAILABLE FROM HARRIS PRODUCTS GROUP salesinfo@jwharris.com 513-754-2000 www.harrisproductsgroup.com

STATEMENT OF LIABILITY-DISCLAIMER

To the best of the Harris Products Group knowledge, the information and recommendations contained in this publication are reliable and accurate as of the date prepared. However, accuracy, suitability, or completeness are not guaranteed, and no warranty, guarantee, or representation, expressed or implied, is made by Harris Products Group. as to the absolute correctness or sufficiency of any representation contained in this and other publications; Harris Products Group. assumes no responsibility in connection therewith; nor can it be assumed that all acceptable safety measures are contained in this and other publications, or that other or additional measures may not be required under particular or exceptional conditions or circumstances. Data may be changed from time to time.

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): GAS LEAK DETECTOR
CHEMICAL NAME/CLASS: Aqueous Solution of Methanol
SYNONYMS: Not Applicable
PRODUCT USE: Gas Leak Detection
DOCUMENT NUMBER: 0141
SUPPLIER/MANUFACTURER'S NAME: HARRIS Products Group
ADDRESS: 4501 Quality Place Mason, OH 45040
EMERGENCY PHONE: CHEMTREC: 1-800-424-9300
BUSINESS PHONE: 513-754-2000 FAX 513-754-8778
DATE OF PREPARATION: December 22, 2010

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL		IDLH	OTHER
			TWA ppm	STEL ppm	TWA ppm	STEL ppm		
Methanol	67-56-1	10-20	200 (Skin)	250	200 (Skin)	250 (Vacated 1989 PEL)	6000	NIOSH RELs: TWA = 200 (Skin) STEL = 250 (Skin) DFG MAKs: TWA = 200 (Danger of Cutaneous Absorption) PEAK = 2•MAK 30 min., average value DFG MAK Pregnancy Risk Classification: C
Anionic & nonionic detergent compounds	proprietary	1-5	NE	NE	NE	NE	NE	NE
Water and other components. Each of the other components are present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).		Balance	None of the other components contribute significant additional hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).					

NE = Not Established.

See Section 16 for Definitions of Terms Used.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a colorless aqueous soap solution, with a slight odor of alcohol. Exposure to the vapors of this product may be irritating to the respiratory tract, and eyes. Inhalation of vapors of this product can cause symptoms of central nervous system depression, such as headaches, nausea, dizziness, incoordination, and confusion. Due to the presence of Methanol, exposure to high concentrations of this product's vapors may cause visual impairment and effects on other organs. This product is not normally reactive. Emergency responders must wear the proper personal protective equipment (and have appropriate fire suppression equipment) suitable for the situation to which they are responding.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of over-exposure for this product are inhalation of vapors and contact with skin and eyes. The symptoms of overexposure, via route of entry, to this product are as follows:

INHALATION: Inhalation of this product's vapors may irritate the mucous membranes, the nose, throat and respiratory tract. Though not likely to occur as a result of routine use following the manufacturer's instructions, severe inhalation exposures to vapors may cause serious effects (due to the presence of Methanol).

It is important to note that human systemic effects following Methanol exposure via inhalation (and ingestion) include changes in circulation, cough, dyspnea, headache, lacrymation, nausea or vomiting, optic nerve neuropathy, respiratory effects and visual changes or disturbances. There are reports that inhalation of Methanol vapors can cause blindness, and may cause other health effects under "Ingestion". Repeated exposure via inhalation can worsen existing conditions of emphysema and bronchitis. High concentrations of vapors, as may occur if large volumes of this product are released in a poorly ventilated area or confined space (or during a release of large volumes of this product), can cause unconsciousness. Severe inhalation over-exposure may be fatal.

Detergent compounds, another component of this product, is a potential respiratory sensitizer; chronic exposures may lead to the development of asthma and other allergic respiratory reactions.

CONTACT WITH SKIN or EYES: Skin contact is mildly irritating to the skin. Prolonged or repeated skin contact can result in dermatitis (inflammation and redness of the skin). Vapors of this product are irritating to the eyes. This product may be a moderate eye irritant, causing redness, pain, swelling, double or blurred vision, and tearing. Detergent compounds, a component of this product, is a potential skin sensitizer; chronic exposures may lead to the development of rashes and other allergic skin reactions.

SKIN ABSORPTION: Methanol, a component of this product, readily absorbs through intact skin and can produce systemic toxicity, especially upon repeated skin exposure. Symptoms of skin absorption will be similar to those described in "Inhalation" and "Ingestion".

INGESTION: If swallowed call physician immediately! Do not induce vomiting unless directed by medical personnel. Rinse mouth with water if person is conscious. Never give fluids or induce vomiting if person is unconscious, having convulsions, or not breathing.

INJECTION: Injection is not anticipated to be a significant route of over-exposure for this product. If this product is "injected" (as may occur through punctures by contaminated, sharp objects), local swelling and irritation can occur. Symptoms similar to those seen for "Inhalation" or "Ingestion" may occur.

OTHER HEALTH EFFECTS: Based on animal evidence, Methanol (a component of this product) exposure may present a possible reproductive hazard by causing harm to the fetus. See Section 11 (Toxicological Information) for further information.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Symptoms associated with over-exposure to this product are described on the following page.



HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH	(BLUE)	1
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FLAMMABILITY	(RED)	2
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REACTIVITY	(YELLOW)	0
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PROTECTIVE EQUIPMENT	B
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EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For routine applications.

See Section 16 for Definition of Ratings

3. HAZARD IDENTIFICATION (Continued)

ACUTE: Inhalation of low concentrations of this product's vapors will irritate to the respiratory tract. Inhalation of higher concentrations may cause central nervous system depression, visual disturbances, changes in circulation, cough, dyspnea, headache, lacrymation, nausea or vomiting. Severe inhalation over-exposure may be fatal. Brief contamination of skin may be irritating. Eye contact may cause moderate irritation. Ingestion of this product can cause permanent blindness or death.

CHRONIC: Chronic over-exposure via inhalation may lead to symptoms of central nervous system depression, and can worsen pre-existing conditions of asthma, emphysema and bronchitis. Repeated exposure by inhalation or skin absorption may cause systemic poisoning, brain disorders, impaired vision and blindness. Detergent compounds, a component of this product, is a potential sensitizer; chronic exposures may lead to the development of asthma, rashes and other allergic respiratory skin reactions. See Section 11 (Toxicological Information) for further information.

TARGET ORGANS: ACUTE: Skin, eyes, respiratory and central nervous system. CHRONIC: Central nervous system, respiratory system, skin, heart, liver, and kidneys.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Victims of chemical exposure must be taken for medical attention, if adverse health effects occur. Rescuers should be taken for medical attention, if necessary. Take copy of label and MSDS to health professional with victim.

SKIN EXPOSURE: In the event of skin-over-exposure, rinse affected area with a soap and water solution. If skin contact results in irritation, the minimum flushing is for 15 minutes. Victim must seek medical attention if adverse health effects occur.

EYE EXPOSURE: If this product enters the eyes, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek medical attention if adverse health effects occur.

INHALATION: If this product is inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions.

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. Do not induce vomiting, unless directed by medical personnel. Have victim rinse mouth with water, if conscious. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing dermatitis, other skin conditions, respiratory conditions such as asthma, or emphysema, and central nervous system conditions and conditions of the liver and kidneys may be aggravated by over-exposure to this product. Eye disorders may also be aggravated after over-exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Threat symptoms and eliminate exposure. Tests of the central nervous system, kidney, liver may prove useful. If necessary, treat for Methanol poisoning. The following information for the treatment of Methanol Poisoning is from the "Toxicology of Commercial Chemical Products" (5th Edition, 1984): Ethyl alcohol, when consumed at the same time as methyl alcohol, prolongs the latent period before toxic symptoms appear. It has also been observed that some of the severe symptoms of methanol poisoning are alleviated by the ingestion of ethanol, and for this reason the recommended treatment includes the administration of ethanol by mouth, by stomach tube, and/or by intravenous infusion. A blood ethyl alcohol level of 0.1% is regarded as optimal. In extreme cases, ethanol may be given intravenously as a dilute solution in bicarbonate or saline. Other treatments include gastric lavage, administration of sodium bicarbonate (4 g every 15 minutes) for the treatment of acidosis, administration of oxygen, and hemodialysis. Due to Methanol's impact on the eyes, protect the patient's eyes.

5. FIRE-FIGHTING MEASURES

FLASH POINT (Tag Closed Cup): 53.4°C (128°F) [Product]

AUTOIGNITION TEMPERATURE: 385-470°C (725-878°F) [Methanol]

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): 6.0%

Upper (UEL): 36.0%

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES (for cooling) Carbon Dioxide: YES

Halon: YES

Foam: YES

Dry Chemical: YES

Other: Any "B" Class.

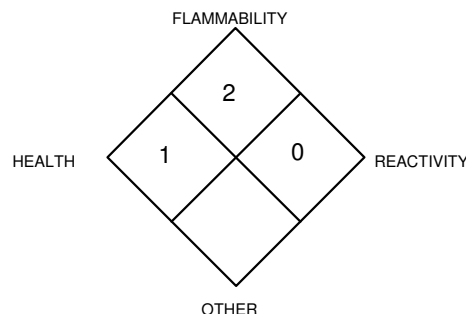
UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is an aqueous soap solution. During a fire, irritating and toxic gases (i.e. carbon monoxide, carbon dioxide, and sodium oxides) may be generated.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: If this product is moderately heated, the vapors may ignite if exposed to static electrical discharge..

SPECIAL FIRE-FIGHTING PROCEDURES: Move containers from fire area if it can be done without risk to personnel. Stop leaks or discharges if possible. Structural fire fighters must wear Self-Contained Breathing Apparatus and full protective equipment. If this product is involved in a fire, fire run-off water should be contained to prevent possible environmental damage.

NFPA RATING



**See Section 16 for
Definition of Ratings**

6. ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a large, uncontrolled release, clear the affected area and protect people.

In the event of an incidental release of this product, minimum Personal Protective Equipment should be gloves (rubber gloves over latex gloves), safety goggles, and appropriate body protection. **Level B Protection (which includes Self-Contained Breathing Apparatus) for non-incidental releases, during spill response situations in which the oxygen level is below 19.5%, or when the oxygen level is unknown.** Monitor the surrounding area for combustible vapor levels. The level of combustible vapors must be below 10% of the LEL (see Section 5, Fire-Fighting Measures) before personnel are allowed into the spill area.

The atmosphere must have levels of Methanol lower than those listed in Section 2 (Composition and Information on Ingredients) and at least 19.5 percent oxygen before personnel can be allowed in the area without Self-Contained Breathing Apparatus. Eliminate all sources of ignition before cleanup operations begin. Use non-sparking tools. Prevent material from entering sewer or confined spaces. Absorb spilled liquid with activated carbon, polypads, or other suitable absorbent materials. Decontaminate the area thoroughly. Place all spill residues in an appropriate container and seal. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations, or the appropriate Standards of Canada and its Provinces (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after using this product. Do not eat, drink, smoke, or apply cosmetics while handling this product.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Keep away from heat, sparks, and other sources of ignition. Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Have appropriate extinguishing equipment in the storage area (i.e., portable fire extinguishers). Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid or vapors, which are combustible; therefore, empty containers should be handled with care.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation. Use a mechanical fan or vent area to outside. Prudent practice is to ensure eyewash/safety shower stations are available near areas where this product is used.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below guidelines listed in Section 2 (Composition and Information on Ingredients), if applicable. If respiratory protection is needed, U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Respiratory Protection is recommended to be worn during welding operations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998). For additional information the NIOSH recommended respiratory protection guidelines for Methanol are provided, as follows:

CONCENTRATION

Up to 2000 ppm:

Up to 5000 ppm:

Up to 6000 ppm:

RESPIRATORY EQUIPMENT

Supplied Air Respirator (SAR).

Supplied Air Respirator (SAR) operated in a continuous-flow mode.

Supplied Air Respirator (SAR) with a tight-fitting facepiece, operated in a continuous-flow mode, full facepiece Self Contained Breathing Apparatus (SCBA), or full facepiece Supplied Air Respirator (SAR).

Emergency or Planned Entry into Unknown Concentration or IDLH Conditions: Positive-pressure, full facepiece SCBA or positive pressure, full facepiece SAR with an auxiliary positive pressure SCBA.

Escape: Gas mask with organic vapor canister or escape-type SCBA.

EYE PROTECTION: Safety glasses or goggles.

HAND PROTECTION: Wear butyl rubber, nitrile rubber, or polyfluorinated polyethylene gloves for routine industrial use.

BODY PROTECTION: None normally needed for normal circumstances of use. Use body protection appropriate for task (i.e. apron, coveralls).

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): Not established.

SPECIFIC GRAVITY (water = 1): Approximately 1.0

SOLUBILITY IN WATER: Soluble.

VAPOR PRESSURE, mm Hg @ 20°C: Approximately 18 mm Hg

PARTITION COEFFICIENT (n-octanol/water): Not established.

ODOR THRESHOLD: Not established.

APPEARANCE and COLOR: This is clear, aqueous soap solution with a slight alcohol odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): The odor may act as a distinguishing characteristic of this product.

EVAPORATION RATE (n-BuAc = 1): < 1

MELTING POINT: < 0°C (< 32°F)

BOILING POINT: > 100°C (> 212°F)

pH: Approximately 7.0

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: Carbon oxides, a variety of organic molecules, sodium compounds.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is not compatible with strong oxidizing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposing this product to incompatible materials and temperatures above 150°F.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following human toxicological data are available for the components of this product. Other data for animals are available but are not presented in this Material Safety Data Sheet.

METHANOL:

DNA Inhibition-Human: lymphocyte 300 mmol/L
Oral-Man LDLo :6422 mg/kg: Central nervous system effects, Pulmonary system effects, Gastrointestinal tract effects
Oral-Man TDLo: 3429 mg/kg: Eye effects
Oral-Human LDLo: 428 mg/kg: Central nervous system effects, Pulmonary system effects

METHANOL (continued):

Oral-Human LDLo: 143 mg/kg: Eye effects, Pulmonary system effects, Gastrointestinal tract effects
Oral-Woman TDLo: 4 g/kg
Oral-Woman TDLo: 4 g/kg: Eye effects, Pulmonary system effects, Gastrointestinal tract effects

METHANOL (continued):

Inhalation-Human TCLo: 86,000 mg/m3: Eye effects, Pulmonary system effects
Inhalation-Human TCLo: 300 ppm: Eye effects, Central nervous system effects, Pulmonary system effects

11. TOXICOLOGICAL INFORMATION (Continued)

SUSPECTED CANCER AGENT: The components of this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, CAL/OSHA; therefore, they are not considered to be, nor suspected to be cancer causing agents by these agencies.

IRRITANCY OF PRODUCT: This product can be mildly to moderately irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: Detergent compounds, a component of this product, are a potential sensitizer; chronic exposures may lead to the development of asthma, rashes and other allergic respiratory skin reactions.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: Human mutation data are available for Methanol (a component of this product); these data were obtained during clinical studies involving specific human tissues exposed to this compound.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans. Teratogenicity data are available for Methanol (a component of this product); these data were obtained during clinical studies on test animals exposed to relatively high doses of Methanol. Slight behavioral effects were seen in the offspring of female rats ingesting methanol during pregnancy.

Reproductive Toxicity: This product is not reported to cause teratogenic effects in humans. Reproductive toxicity data are available for Methanol (a component of this product); these data were obtained during clinical studies on test animals exposed to relatively high doses of Methanol.

A *mutagen* is a chemical, which causes permanent changes to genetic material (DNA) such that the changes will propagate through generation lines. An *embryotoxin* is a chemical, which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A *teratogen* is a chemical, which causes damage to a developing fetus, but the damage does not propagate across generational lines. A *reproductive toxin* is any substance, which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, the following ACGIH Biological Exposure Indices (BEIs) have been determined for Methanol.

CHEMICAL DETERMINANT	SAMPLING TIME	BEI
METHANOL • Methanol in urine	• End of shift	• 15 mg/L

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product will be degraded over time into other organic compounds. Additional environmental data are available as follows:

METHANOL: The 5-day Biological Oxygen Demand (BOD) values reported for Methanol are 0.6 to 1.12 lb/lb. The Log K_{ow} of Methanol is -0.77. The bio-concentration factor for Methanol is estimated at 0.2 from a recommended regression-derived equation.

DETERGENT COMPOUNDS: Biological Oxygen Demand (BOD) value : 4%/5 days.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product may be harmful or fatal to contaminated plant and animal-life (especially if large quantities of this product are released). Specific data on test animals are available, but are not presented in this Material Safety Data Sheet.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product can be harmful or fatal to contaminated aquatic plant and animal life. Additional aquatic toxicity data are available as follows:

METHANOL:

LC₅₀ (*Pimephales promelas*, fathead minnow) = 29.4 mg/L/ 96 hours

EC₀ (*Pseudomonas putida*, bacteria) = 6,600 mg/L/ 16 hours

EC₀ (*Microcystis aeruginosa*, algae) = 530 mg/L/ 8 days

EC₀ (*Scenedesmus quadricauda*) = 8,000 mg/L/ 7 days

LD₀ (*Scenedesmus*, algae) = 10,000 mg/L

EC₀ (*Entosiphon sulcatum*, protozoa) > 10,000 mg/L/ 72 hours

EC₀ (*Uronema parduczi* Chatton-Lwoff, protozoa) > 10,000 mg/L

LD₀ (*Colpoda*, protozoa) = 1,250 mg/L

NOEC (*Daphnia*, crustaceans) = 10,000 mg/L/ 48 hours

EC₅₀ (*Daphnia magna* Straus, crustaceans) > 10,000 mg/L/ 24 hours

LC₅₀ (*Artemia salina*, crustaceans) > 10,000 mg/L/ 24 hours

LC₅₀ (trout) = 8,000 mg/L/ 48 hours

LC₀ (creek chub) = 8,000 mg/L/ 24 hours

METHANOL (continued):

LC₁₀₀ (creek chub) = 17,000 mg/L/ 24 hours

LC₅₀ (*Salmo gairdneri*, fish) = 20,100 mg/L/ 96 hours

EC₅₀ (*Salmo gairdneri*, fish) = 13,000 mg/kg/ 96 hours

LC₅₀ (*Lepomis macrochirus*, fish) = 15,400 mg/L/ 96 hours

EC₅₀ (*Lepomis macrochirus*, fish) = 12,700 mg/L/ 96 hours

LC₅₀ (*Alburnus alburnus*, fish) = 28,000 mg/L/ 96 hours

LC₅₀ (*Nitocra spinipes*) = 12,000 mg/L/ 96 hours

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, or the applicable standards of Canada and its Provinces. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: Not applicable to wastes consisting only of this product.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS (Per 49 CFR 172.101) BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Not applicable

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable

UN IDENTIFICATION NUMBER: Not applicable

PACKING GROUP: Not applicable

DOT LABEL(S) REQUIRED: None

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER, 2000: Not applicable

MARINE POLLUTANT: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This material is not considered as dangerous goods, per regulations of Transport Canada.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, and are listed as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Methanol	NO	YES	YES

U.S. SARA THRESHOLD PLANNING QUANTITY: Not applicable.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Methanol = 5000 lb (2270),

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Methanol.

California - Permissible Exposure Limits for Chemical Contaminants: Methanol.

Florida - Substance List: Methanol.

Illinois - Toxic Substance List: Methanol.

Kansas - Section 302/313 List: Methanol.

Massachusetts - Substance List: Methanol.

Michigan - Critical Materials List: No.

Minnesota - List of Hazardous Substances: Methanol.

Missouri - Employer Information/Toxic Substance List: Methanol.

New Jersey - Right to Know Hazardous Substance List: Methanol.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Methanol.

Pennsylvania - Hazardous Substance List: Methanol.

Rhode Island - Hazardous Substance List: Methanol.

Texas - Hazardous Substance List: Methanol.

West Virginia - Hazardous Substance List: Methanol.

Wisconsin - Toxic and Hazardous Substances: Methanol.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of these products is on the California Proposition 65 List. **WARNING: This product may contain chemicals, and when used for welding may produce fumes or gases containing chemicals, known to the State of California to cause cancer, and/or birth defects (or other reproductive harm.)**

ADDITIONAL CANADIAN REGULATIONS:

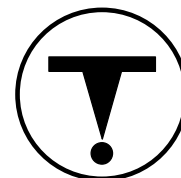
CANADIAN DSL/NDL INVENTORY STATUS: The components of this product are on the DSL/NDL Inventories.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

The components of this product are not on the CEPA Priorities Substances Lists.

CANADIAN WHMIS SYMBOL: **Class D2A/D2B:** Materials Causing Other Toxic Effects



16. OTHER INFORMATION

DATE OF PRINTING:

December 22, 2010

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DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these, which are commonly used, include the following:

CAS #: This is the Chemical Abstract Service Number, which uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **TLV** - Threshold Limit Value - an airborne concentration of a substance, which represents conditions under which it is generally believed that nearly all workers, may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average (**TWA**), the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level (**C**). Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL, which was vacated by Court Order. **IDLH** - Immediately Dangerous to Life and Health - This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**RELs**). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]). Reactivity Hazard: **0** (normally stable); **1** (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure causes death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD₅₀** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC₅₀** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m³** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** **EC** is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **U.S.:** **EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA:** **CEPA** is the Canadian Environmental Protection Act. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDL** are the Canadian Domestic/Non-Domestic Substances Lists. **The CPR is the Canadian Product Regulations.** This section also includes information on the precautionary warnings, which appear, on the materials package label.