

(11196)

Vulsay Industries Ltd.
MATERIAL SAFETY DATA SHEET

FLO-PERM WINDSHIELD WASHER ANTI-FREEZE -40° C

REVISION DATE: March 24, 2014

SECTION I: PRODUCT INFORMATION

MATERIAL NAME IDENTIFIER: Flo-perm Windshield Washer Antifreeze pre-mix -40° C
SUPPLIER: Vulsay Industries Ltd.
ADDRESS: 35 Regan road, Brampton, Ontario L7A 1B2 PHONE: (905) 846 2200
CHEMICAL NAME: Methanol CHEMICAL FAMILY: Alcohol/water mixture
PRODUCT USE: Windshield washer cleaner solution
24 hours EMERGENCY Phone # - Call CANUTEC at (613) 996 6666

PART NUMBERS
33521, 64201, 8160
30821A, 30821B,
8160DLVRD

EMERGENCY OVERVIEW:

Blue colour liquid, with a mild, characteristic alcohol odour. FLAMMABLE LIQUID AND VAPOUR. Confined space toxicity hazard. Mild central nervous system depressant following inhalation, skin absorption or ingestion. May cause headache, nausea, dizziness, drowsiness, and incoordination. Severe visual 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. POSSIBLE REPRODUCTIVE HAZARD - may cause fetotoxic and teratogenic effects, based on animal data.

SECTION II: PREPARATION INFORMATION

SOURCES USED: Technical references and MSDS on raw materials
PREPARED BY: Safety coordinator and quality control department PHONE #: (905) 846 2200
REVISION NOTES: Reprint

SECTION III - HAZARDOUS INGREDIENTS

| INGREDIENT | VOLUME(%) | CAS# | UN# | LD50 | LC50 |
|------------|-----------|---------|------|--|---|
| METHANOL | 44 - 49 | 67-56-1 | 1230 | 6.2 g/kg (Oral, rat) 20 ml/kg (Dermal, rabbit) | 64,000 ppm (Rat, inhalation 4 hours) |

SECTION IV: PHYSICAL DATA

PHYSICAL STATE: Liquid
ODOUR AND APPEARANCE: Clear blue liquid with slight alcohol odour ODOUR THRESHOLD: Data not available
VAPOUR PRESSURE (mmHg): Data not available SOLUBILITY IN WATER: Completely soluble
VAPOUR DENSITY (AIR =1): Data not available EVAPORATION RATE (n-butyl acetate = 1): 2.1
% VOLATILE: 100 BOILING POINT (DEG C): 79.5
SPECIFIC GRAVITY (20 DEG C): 0.930 - 0.940 FREEZING POINT (DEG C): minus 40
pH: 7.5-9

APPROVED MATERIAL
APR 22 2015
MSDS # 11196
APPROVED BY *[Signature]*

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SECTION V: FIRE AND EXPLOSION HAZARDS

FLASH POINT (DEG C) AND METHOD: 27 (TCC)

UPPER EXPLOSION LIMIT (% BY VOLUME): 36.5 for METHANOL

LOWER EXPLOSION LIMIT (% BY VOLUME): 6.0 for METHANOL

AUTO IGNITION TEMPERATURE (DEG C): >385

UNUSUAL FIRE AND EXPLOSION HAZARDS:

The material is a flammable liquid and the vapours may form an explosive mixture between upper and lower explosion limits.

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 |

| 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. |

SECTION VI: REACTIVITY DATA

CHEMICAL STABILITY: Stable

INCOMPATIBILITY: Strong oxidizing materials, reactive chemicals, corrosive to lead and aluminium

REACTIVITY: Not normally reactive

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂, Formaldehyde gas produced on combustion

CONDITIONS TO AVOID: Avoid sparks, open flames and all ignition sources.

SECTION VII: TOXICOLOGICAL PROPERTIES

LD50 OF PRODUCT: 14.7 g/kg oral-rat, 47.6 ml/kg dermal-rabbit (projected from data for Methanol)

LC50: 64000 ppm inhalation rat 4 hrs (for Methanol).

EXPOSURE LIMITS: (For Methanol) ACGIH TLV-TWA = 200 ppm - skin notation

OSHA PEL = 200 ppm, STEL = 200 ppm - skin

SENSITIZATION: No, CARCINOGENICITY: No, TERATOGENICITY: No

REPRODUCTIVE TOXICITY: Birth defects reported in rats exposed to 20,000 ppm

SYNERGISTIC EFFECT: No data

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EFFECTS OF OVEREXPOSURE: Irritating to skin, eyes, lungs, nose and throat. Prolonged or repeated skin contact may cause irritant dermatitis. Allergic dermatitis has also been reported. **If swallowed, this product may cause blindness or fatality. May be absorbed by inhalation, skin contact and ingestion, causing early symptoms of headache, dizziness, sleepiness, giddiness, muscular in-coordination or at high doses, coma or death. May cause severe delayed effects including abdominal pain, nausea, blurred vision and neurological dysfunction.**

SECTION VIII: PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

EYES AND FACE: Splash proof goggles and/or face shield should be worn in situations having the potential for eye contact.

SKIN (HAND, ARMS AND BODY): Impervious gloves (neoprene) should be worn at all times when handling this product. In confined work spaces or where spaces or where the risk of skin exposure is much higher, impervious clothing should also be worn.

RESPIRATORY: Must be worn in all situations where the recommended occupational exposure limit is exceeded. Proper equipment includes an atmosphere-supplied, positive pressure demand self-contained or airline breathing apparatus for concentrations in excess of the recommended occupational exposure limit.

MECHANICAL VENTILATION:

GENERAL: Highly recommended for all indoor situations. Concentrations in air should be maintained below lower explosive limit at all times, or below the recommended threshold limit value if unprotected personnel are included.

LOCAL: Required for personnel entry into confined spaces (i.e. bulk storage tanks)

MAKE-UP AIR: Should always be supplied to balance air exhausted (generally or locally)

ENVIRONMENTAL EFFECTS AND HAZARDS:

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes rivers, streams, or public waterways. Block off drains and ditches. Provincial and/or federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition, or to the satisfaction of authorities.

STORAGE AND HANDLING:

Flammable liquid. Contents may catch fire. Keep away from heat, flame and spark. Use only in a well ventilated area. Keep containers tightly sealed. Handling equipment should be grounded to prevent accumulation of static charge. Avoid any direct contact. Use good personal hygiene.

SPILLS AND LEAK PROCEDURES:

Issue warning "Flammable". Eliminate all ignition sources. Isolate hazard area and restrict access. Wear appropriate breathing apparatus and protective clothing. Stop leak only if safe to do so. Dike and contain land spill. Pump into salvage containers. Soak up residue with natural or synthetic absorbent. Place in containers. Flush with water. Dispose of materials as noted below. Notify appropriate environmental agency.

WASTE DISPOSAL METHODS:

1. Reclaim.
2. Incinerate with approval of environmental authorities.
3. Dispose in a licensed waste disposal company.
4. Landfill absorbed material in an approved site.

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SECTION IX: FIRST AID MEASURES

INHALATION: Remove victim from further exposure and restore breathing if stopped. Obtain medical attention immediately.

SKIN: Wash contaminated skin with water and mild soap. Remove contaminated clothing.

EYES: Flush eyes with water for at least 15 minutes. Obtain medical attention.

INGESTION: Contains methyl alcohol. If swallowed, call a Poison Control Center or doctor immediately. If person is alert, induce vomiting.

NOTE TO PHYSICIANS: The severity of outcome following methyl alcohol ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure. Ethanol (contained in alcoholic beverages) can slow the metabolism of methanol, thus reducing the potential for harmful effects.

SECTION X: ADDITIONAL INFORMATION

WHIMS CLASSIFICATION:

B2 - Flammable and combustible material - Flammable liquid
D1B - Poisonous and infectious material - Immediate and serious effects- Toxic
D2A - Poisonous and infectious material - Other effects - Very toxic
D2B - Poisonous and infectious material - Other effects - Toxic



TDG CLASSIFICATION:

4x3.78L package and 1x205L

Since the contents are in a small means of containment (less than or equal to 450 L) TDG regulations do not apply to these packages

Size greater than 450 L and bulk – TDG regulations apply.

Alcohols, N.O.S.(Methanol/Water solution)

Class: 3, UN1987, PG: III

Placard:



The recommendations and data presented herein are believed to be correct. However, no warranty is expressed or implied regarding the accuracy of the data or the results obtained from the use of this information or the use of product.