

Vulsay Industries Ltd.
MATERIAL SAFETY DATA SHEET

Flo-perm Windshield Washer Concentrate

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PRODUCT INFORMATION

PRODUCT NAME: Flo-perm Windshield Washer Concentrate
SUPPLIER: Vulsay Industries Ltd.
ADDRESS: 35 Regan road, Brampton, Ontario L7A 1 B2
CHEMICAL NAME: Methanol
EMERGENCY PHONE #: (613)996 6666 (CANUTEC)

PACKAGER: Vulsay Industries Ltd.
PHONE: (905) 846 2200
PRODUCT USE: Solvent

PART NUMBERS
70011
64301

PREPARATION INFORMATION

SOURCES USED: Technical references and MSDS of similar products

PREPARED BY: Quality control department

PHONE #: (905) 846 2200

LAST DATE OF REVISION: May 1, 2006

REVISION NOTES: Date revised

HAZARDOUS INGREDIENTS

INGREDIENT	VOLUME(%)	CAS#	UN#	LD50	LC50
METHANOL	80 - 100%	67-56-1	1230	6.2 g/kg (Oral, rat) 20 ml/kg (Dermal, rabbit)	64,000 ppm (Rat, inhalation) 4 hours)

PHYSICAL DATA

PHYSICAL STATE: Liquid

ODOUR AND APPEARANCE: Clear, blue coloured liquid with slight alcohol odour

ODOUR THRESHOLD: 2000 ppm, irritation at 1000 ppm, poor warning properties

VAPOUR PRESSURE (mm Hg): 96 @ 20° C, 500 @ 55° C

SOLUBILITY IN WATER: Completely soluble

VAPOUR DENSITY (AIR =1): 1.105 @ 1

EVAPORATION RATE (n-butyl acetate = 1): 2.1

% VOLATILE: 100

BOILING POINT (DEG C): 69

SPECIFIC GRAVITY (20 DEG C): 0.860

FREEZING POINT (DEG C): -97.5 C

FIRE AND EXPLOSION HAZARDS

Flammable Product

FLASH POINT (DEG C) AND METHOD: 13 (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.

MEAN OF EXTINCTION: Alcohol, Foam, CO2, Dry chemicals

SPECIAL PROCEDURES: Do not use water except as for, wear respiratory equipment, use flooding quantities of water as a fog and to cool all containers involved in fire. Application of solid streams of water may spread fire. **Ground all equipment during handling.** Fire fighters must wear protective clothing and full-face positive pressure breathing apparatus.

CHEMICAL STABILITY: Stable

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

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.



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TOXICOLOGICAL PROPERTIES

EXPOSURE LIMITS: 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

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 incoordination or at high doses, coma or death. May cause severe delayed effects including abdominal pain, nausea, blurred vision and neurological dysfunction.

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 workspaces or where spaces or where the risk of skin exposure is much higher, impervious clothing should also be worn.

RESPIRATORY: NIOSH recommended, with consideration for poor warning properties. 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 limits 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, lake, 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. Keep away from heat, sparks and open flames. Keep containers tightly sealed. Store away from oxidizing agents, dry area with adequate explosion-proof ventilation. Handling equipment should be grounded to prevent accumulation of static charge. Avoid any direct contact. Use good personal hygiene. Tanks must be grounded and vented and should be nitrogen blanketed. Tanks must be diked. No smoking or open flame in storage, use or handling areas. Use explosion proof electrical equipment. Ensure proper electrical grounding procedures are in place.

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.

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 Centre or doctor immediately.** If person is alert, induce vomiting.

ADDITIONAL INFORMATION

SHIPPING INFORMATION: All shipments of Methanol must be properly classified, described, packaged, marked and labeled to conform with regulations set by the Canadian Transport Commission, the Transportation of Dangerous Goods Regulations.

WHIMS CLASSIFICATION: B2, D1A



NOTE: 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.

