

Vulsay Industries Ltd.  
MATERIAL SAFETY DATA SHEET

**Flo-perm Windshield Washer Concentrate**

REVISION DATE: March 05, 2017

**I PRODUCT INFORMATION**

PRODUCT NAME: Flo-perm Windshield Washer Concentrate  
SUPPLIER: Vulsay Industries Ltd. ADDRESS: 35 Regan road, Brampton, Ontario L7A 1 B2  
PHONE: (905) 846 2200 CHEMICAL NAME: Methanol

**PART NUMBERS  
70011, 64301**

**24 hours EMERGENCY Phone # - Call CANUTEC at (613) 996 6666**

**II PREPARATION INFORMATION**

SOURCES USED: Technical references and MSDS of similar products  
PREPARED BY: Quality control department PHONE #: (905) 846 2200  
REVISION NOTES: Specific Gravity value revised

**III 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)

**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.**

**IV 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): 0.840- - 0.8500  
FREEZING POINT (DEG C): -97.5 C

**V 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.

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**Fire Fighting Measures**

<b>Suitable Extinguishing Media</b>	
	<b>Extinguishment Media Use</b>
Small Fire	Dry chemical, CO <sub>2</sub> , 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)

<b>Unsuitable Extinguishing Media</b>	
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.

CHEMICAL STABILITY: Stable

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

REACTIVITY: Not normally reactive

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO<sub>2</sub>, Formaldehyde gas produced on combustion

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

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**VI 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.**

**VII 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.

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**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.

**VIII 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.

**IX 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 - 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



**Transportation Information:**

**TDG:** This material is regulated under Transportation of Dangerous Goods (TDG). All applicable requirements for placard and documentation apply during the transportation of this material.

**DOT:** The material is regulated under US DOT.

Proper shipping Name	METHANOL
Hazard class & Division	3(6.1)
UN Number	UN1230
Packing Group	II

**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.