



MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet complies with the Canadian Controlled Products Act

****NOTE: THE FOLLOWING INFORMATION PROVIDED IS FOR THE PRODUCT CONCENTRATE ONLY, NOT FOR USE-DILUTIONS****

SECTION 1 – PRODUCT IDENTIFICATION					
PRODUCT IDENTIFIER:	MOBIUS				
PRODUCT USE:	Concentrated Vehicle Detergent				
SUPPLIER:	Velocity Chemicals Ltd. Unit #1, 9515- 190 th St., Surrey, B.C. V4N-3S1 Emergency Telephone: (604) 881-4700 Facsimile: (604) 881-4701			In case of transportation emergency or product spill, contact: In Canada- CANUTEC @ 613-996-6666 (24 hrs.)	
SECTION 2 – HAZARDOUS INGREDIENTS					
HAZARDOUS INGREDIENTS	% (W/W)	CAS NUMBER	LD50	LC50	EXPOSURE LIMITS
Ethylenediaminetetraacetic acid, tetrasodium salt	5-10	64-02-8	3030 mg/kg (oral, rat) > 5g/kg (skin, rabbit)	Not available	Not established
Ethylene Glycol Monobutyl Ether	5-10	111-76-2	470mg/kg (oral, rat) 220mg/kg (skin, rabbit)	450ppm (inhal., 4hrs, rat)	OSHA(PEL)= 50ppm, skin ACGIH(TWA)= 20ppm, skin IDLH= 700ppm
Sodium dodecylbenzene sulfonate	7-13	25155-30-0	438 mg/kg (oral, rat)	Not available	Not established
Ethoxylated Alcohol	5-10	68439-46-3	1378 mg/kg (oral, rat) > 2g/kg (skin, rabbit)	Not available	Not established
Ethanolamine	5-10	141-43-5	1.72 g/kg (oral, rat), 1.0 g/kg (skin, rabbit)	Not available	OSHA(PEL) & ACGIH(TLV)= 3ppm(TWA) ACGIH(TLV)= 6 ppm(STEL)
Sodium Hydroxide	1-5	1310-73-2	140-340 mg/kg(oral, rat) LDLo=500mg/kg (skin, rabbit)	Not available	OSHA(PEL) & ACGIH (TLV)= 2mg/m ³ (ceiling)
SECTION 3 – PHYSICAL DATA					

<p>Physical state: liquid</p> <p>Solubility: soluble</p> <p>Odour and Appearance: clear liquid with a mild ammoniacal odor</p> <p>pH (100%) @ 20°C: 12.5-13.5</p> <p>Specific Gravity @ 20°C: 1.10</p> <p>Odour Threshold (ppm): not established</p>	<p>Vapour Density: not determined</p> <p>Vapour Pressure: not determined</p> <p>Evaporation Rate: not determined</p> <p>Boiling Point (°C): not determined</p> <p>Freezing Point (°C): not determined</p> <p>Coefficient of water/oil distribution: Greater than 1</p>
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MOBIUS

SECTION 4 – FIRE AND EXPLOSION DATA

<p>Flammability: No, product is non-flammable.</p> <p>If yes, under what condition: Not applicable.</p> <p>Means of Extinction: Dry chemical, alcohol foam, CO₂, water spray. The product is not flammable. Use extinguishing media suitable for surrounding fires.</p> <p>Special Fire Fighting Procedures: Wear NIOSH/OSHA approved, self contained breathing apparatus for fire fighting situations. Use water spray to cool all nearby fire exposed surfaces.</p> <p>Explosion Data-</p> <p>Sensitivity to impact: None</p> <p>Sensitivity to static discharge: None</p>	<p>Flash Point (°C) and method: not applicable</p> <p>Upper Flammable limit (% volume): not applicable</p> <p>Lower Flammable limit (% volume): not applicable</p> <p>Autoignition temperature (°C): not applicable</p> <p>Hazardous combustion products: carbon/nitrogen/sulfur oxides, and other toxic organic vapours.</p>
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SECTION 5 – REACTIVITY DATA

<p>Chemical Stability: yes, stable under normal storage conditions</p> <p>If no, under what conditions:</p> <p>Incompatibility with other substances: yes</p> <p>If so, under what conditions: strong acids and oxidizers</p> <p>Reactivity, and under what conditions: none known</p> <p>Hazardous Decomposition Products: may form carbon/nitrogen/sulfur oxides upon thermal decomposition.</p>
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SECTION 6 – TOXICOLOGICAL PROPERTIES

<p>Primary route of entry: skin and eye contact, skin absorption, inhalation</p> <p>Effects of Acute Exposure to Product: Product exposure may cause irritation or burns to skin and eye. Inhaling mist or vapors may cause immediate irritation, burns or discomfort to respiratory system, headaches, nausea, etc. Also, may be harmful if absorbed through skin.</p> <p>Effects of Chronic Exposure to Product: Prolonged exposure may cause skin dermatitis and respiratory disorder. May also cause blood, kidney and liver disorders through repeated exposure of Ethylene glycol Monobutyl ether (based on animal test data).</p>

<p>Exposure Limits: see Section 2 under Hazardous Ingredients</p> <p>Irritancy of Product: corrosive to skin, eyes and respiratory system.</p> <p>Sensitization: none known</p> <p>Reproductive Toxicity: none known</p>	<p>Mutagenicity: none known</p> <p>Carcinogenicity: glycol ether monobutyl ether is classified as Group 3 (Unclassifiable as to carcinogenicity in humans) under IARC and A3 (confirmed animal carcinogen with unknown relevance to humans) under ACGIH.</p> <p>Teratogenicity: none known</p> <p>Synergistic Products: none known</p>
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MOBIUS

SECTION 7 – PREVENTATIVE MEASURES

<p>Respiratory Protection: Use a NIOSH/OSHA approved for alkaline mist/dust and organic vapor respirator if mists or vapors are present.</p> <p>Gloves: butyl or natural rubber, nitrile, neoprene</p> <p>Eye Protection: splash proof chemical goggles or face shield.</p>	<p>Footwear: rubber shoes</p> <p>Clothing: long sleeve coveralls</p> <p>Other: rubber apron</p>
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Engineering Controls: General ventilation for normal operating conditions or local exhaust for confined areas.

Leak and Spill Procedures: Wear protective equipment. Contain spill. Prevent runoff to drains or sewers. Recover material by vacuum or pump into a suitable waste container. Reuse material if possible, or otherwise neutralize with acid before disposal. Dispose in accordance with local regulations.

Waste Disposal: Dispose of in accordance with local environmental regulations.

Handling Procedures and Equipment: Use good hygiene practices. Avoid contact with eyes, skin and clothing. Avoid inhaling mists/vapors. Safety shower and eye wash station should be available in the immediate work area.

Storage Requirements: Store in a cool, dry place away from incompatibles. Do not mix with any other chemicals. Keep container closed when not in use. Keep from freezing and temperatures below 30°C.

Special Shipping Information:

WHMIS Classification: D2B, E

TDG Classification: Corrosive Liquid, N.O.S. (Ethanolamine and Sodium Hydroxide Mixture), Class 8, UN 1760, P.G. III

SECTION 8 – FIRST AID MEASURES

Inhalation: Remove victim to fresh air, apply artificial respiration if necessary. Seek medical help.
Ingestion: Give large amounts of water if conscious. Do not induce vomiting. Get medical help immediately.
Skin Contact: Wash thoroughly with water for 15 minutes. If irritation persists, seek medical attention.
Eye Contact: Flush immediately with water for 15-20 minutes. Seek medical help.

SECTION 9 - OTHER INFORMATION

REVISIONS: October 14, 2010

SUPERCEDES: February 27, 2009

PREPARED BY: Technical Department (Customer Service phone number: 604-881-4700)

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