



Material Safety Data Sheet

Occupational Safety and Health Administration, (Non-Mandatory Form), Form Approved OMB No. 1218-0072

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IDENTITY: ENVIROOLUTION ENGINE FLUSHING SOLUTION #5910	Health: 2 Fire: 2 React: 0 PPE: Gloves, Safety Glasses
Product Description: High flash engine flush solution designed for use with engine flushing equipment	Hazard Rating System (NFPA) 0 = Minimal 1 = Slight 2 = Moderate 3 = High 4 = Extreme

Section I - Identification

Manufacturer's Name: EnviroLution	Emergency Telephone Number: 818 256-2355
Address: 511 Fifth Street, San Fernando, CA 91340	Telephone Number for Information: 818 256-2379
	Date Prepared: June 2004

Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	Cas No.	% (optional)	OSHA PEL	ACGIH TLV	Other Limits Recommended
Highly Refined Petroleum Hydrocarbon	64742-54-7				
Hydrotreated Light Distillate	64742-47-8				
Ethylene Glycol Monobutyl Ether	111-76-2		25 PPM	25 PPM	See Section IX
Proprietary Material					

Section III - Physical/Chemical Characteristics

Boiling Point	168 – 238 C.	Specific Gravity (H₂O = 1)	0.88 - .0.91
Freezing Point	Not Available	pH	Not applicable
Vapor Pressure (mm Hg @ 20 C.)	6 est.	% Volatile	No data available
Vapor Density (AIR = 1)	4 – 6 est.	Melting Point	Not applicable
Solubility in Water	Not soluble	Evaporation Rate (Butyl Acetate = 1)	<1
Appearance and Odor	Light Amber, hydrocarbon odor		



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Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used): Greater than 135 F.	Flammable Limits:	LEL: Not Known	UEL: Not known
Extinguishing Media: Water Fog, Alcohol Foam, Carbon Dioxide, Dry Chemical. DO NOT use straight water streams.			
Special Fire Fighting Procedures: Wear approved SCBA with full-face piece operated in the positive pressure demand mode to protect against hazardous effect of normal products of combustion or oxygen deficiency.			
Hazardous Combustion: Burning generates carbon monoxide, carbon dioxide unidentified organic compounds and smoke.			
Unusual Fire and Explosion Hazards:			

Section V - Reactivity Data

Stability	Unstable		Conditions to avoid
	Stable	X	
Incompatibility (Materials to Avoid): Avoid oxidizing agents.			
Hazardous Decomposition or Byproducts: Burning generates carbon monoxide, carbon dioxide and smoke.			
Hazardous Polymerization	May Occur		Conditions to avoid
	Will Not Occur	X	

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
Health Hazards (Acute and Chronic) Skin Contact – Prolonged skin contact may cause irritation and dermatitis. Eye Contact – Product is practically non-irritating to the eyes. Ingestion – Harmful or fatal if swallowed. Ingestion may cause vomiting, headache, and other medical problems. Inhalation – Vapors may cause nasal and respiratory irritation. High concentrations of this product can lead to central nervous system depression			
Carcinogenicity: No	NTP? No	IARC Monographs? No	OSHA Regulated? No.
Signs and Symptoms of Exposure: Skin Contact – Skin contact is not expected to be harmful, but may be slightly irritating to the skin. Eye Contact – Product is mildly irritating to the eyes. Ingestion – Product may be harmful or fatal if swallowed. Ingestion may cause vomiting, headache, and other medical problems. Inhalation – Vapors may cause nasal, respiratory irritation, headache, nausea, dizziness, and in coordination. Note: This product is not a primary skin irritant after exposure of short duration and is not a skin desensitizer.			
Medical Conditions Generally Aggravated by Exposure: None currently known.			
Emergency and First Aid Procedures: Skin Contact – Wash affected area with soap and water and remove contaminated clothing. Get medical attention if irritation persists. Eyes – Immediately flush with water for at least 15 minutes while holding the eyelids apart and away from the eyeballs during flushing. Seek medical attention if irritation occurs. Ingestion – DO NOT INDUCE VOMITING. Guard against aspiration by having the person turn onto their left side. DO NOT GIVE LIQUIDS TO A DROWSY, CONVULSING OR UNCONSCIOUS PERSON. If vomiting occurs			



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spontaneously, keep head below hips to prevent aspiration pneumonitis. Transport immediately to nearest medical facility for treatment. **NOTE TO PHYSICIAN SEE SECTION IX.**
Inhalation – Move to fresh air. If breathing is difficult, administer oxygen until the victim is able to breathe on his or her own without difficulty. Seek medical attention.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Do not allow to enter waterways. Contain and collect with absorbent. Product may ignite.

Waste Disposal Method: Dispose of in accordance with local, state, and federal laws.

Precautions to Be taken in Handling: Do not get on eyes, skin or clothes.

Precautions to Be taken in Storage: None

Special Shipping Instructions: None

Other Precautions: Keep away from open flame and high temperatures.

Section VIII - Control Measures

Respiratory Protection (*Specify Type*): None required for normal use.

Ventilation	Local Exhaust: N/A	Special: N/A
	Mechanical (<i>General</i>): N/A	Other: Normal air circulation.
Protective Gloves: Nitrile/Vinyl/Rubber	Eye Protection: Glasses/Goggles (Recommended). Contact lens should not worn when working with this product.	
Other Protective Clothing or Equipment: Coveralls/Apron		
Work/Hygienic Practices: Always wash you hands after handling chemicals. Never wear contaminated clothing.		

Section IX – Other Information

The only ingredient of Engine Flush Solution with established exposure limits is undiluted Ethylene Glycol Monobutyl Ether (<8%) (CAS No. 111-76-2): the OSHA PEL and ACGIH TLV is 25 PPM (skin). **Note, however, the undiluted Ethylene Glycol Monobutyl Ether is only one of the raw materials that under go processing and dilution during the manufacture of Engine Flushing Solution. Upon completion of the manufacturing process, Engine Flushing Solution does not possess the occupational health risks associated with the exposure to the undiluted Ethylene Glycol Monobutyl Ether.**

Toxicology Data: Test on laboratory animals indicate that material (Ethylene Glycol Monobutyl Ether) may produce adverse reproductive effects.

LD50 Oral Rat > 34.6 g/kg
LC50 Inhalation Rat > 1277 ppm for 6 hours
LD50 Dermal Rabbit > 15.4 g/kg

Note To Physician: The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with



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supervision. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

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