

MATERIAL SAFETY DATA SHEET

THE MILSOLV COMPANIES
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SECTION I - PRODUCT

PRODUCT NUMBER: 4918
 PRODUCT NAME: COOLANT, LOW CONDUCTIVITY MILLER ELECTRIC ITEM
 DATE OF PREPARATION: 1/01/98
 REPLACES: 12/16/97
 HMIS RATING: HEALTH 2
 FLAMMABILITY 1
 REACTIVITY 0
 EMERGENCY PHONE NUMBER: CHEMTREC (800) 424-9300
 MSDS Review 03/19/01

COOLANT
 043810

SECTION II - HAZARDOUS INGREDIENTS

PRODUCT NAME	CAS #	VAPOR PRESSURE (mm Hg)	TLV	UNITS
CHEMICAL NAME		PERCENT	PEL	UNITS
ETHYLENE GLYCOL 1,2-ETHANEDIOL	107-21-1	.1 >9%	50 N.E.	PPM
DEIONIZED WATER WATER	7732-18-5	>9%	N.E. N.E.	

SECTION III - PHYSICAL DATA

BOILING RANGE: 212 - 387 DEG F
 VAPOR DENSITY: HEAVIER THAN AIR
 EVAPORATION RATE: SLOWER THAN ETHER
 PERCENT VOLATILE BY VOLUME: 050%
 WEIGHT/GALLON: 8.81 LBS/GAL

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

HAZARD CLASSIFICATION OSHA: COMBUSTIBLE LIQUID-CLASS III B
 DOT:
 FLASH POINT (TCC): > 241 DEG F
 LOWER EXPLOSION LIMIT % BY VOLUME (IN AIR): > 3.2
 EXTINGUISHING MEDIA: Carbon dioxide. Dry chemical. Alcohol-type foam. Water spray. Universal-type foam.
 SPECIAL FIREFIGHTING PROCEDURES: A solid stream of water directed into hot, burning liquid would cause frothing and scattering of burning material. Don't spray pool fires directly.
 UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

INGESTION: Dizziness. Abdominal discomfort. Possible kidney damage. Malaise. Lumbar pain. Oliguria. Uremia. Central nervous system depression. Death.

SKIN ABSORPTION: No evidence of adverse effects from available information.

INHALATION: Headache. Dizziness. Vomiting. Nausea. Irritation.

SKIN CONTACT: No evidence of adverse effects from available information.

EYE CONTACT: Minor irritation. Conjunctivitis.

CHRONIC EFFECTS OF OVEREXPOSURE: Inhalation of mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

OTHER HEALTH HAZARDS: Ethylene Glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations. There is, however, no currently available information to suggest that ethylene glycol has caused birth defects in humans. Therefore, ethylene glycol is considered an animal teratogen. Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence, or a different pattern of tumors compared with untreated controls. The absence of a carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

PRIMARY ROUTE(S) OF ENTRY: Ingestion. Skin absorption. Eye contact.

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call a physician.

SKIN: Immediately wash skin with soap and plenty of water. Remove and wash contaminated clothing promptly.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

NOTES TO PHYSICIAN: The principal toxic effects of Ethylene Glycol, when swallowed, are kidney damage and metabolic acidosis. Ethanol is antidotal, as its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. Ethanol should be given intravenously, as a 5% solution in sodium bicarbonate, at a rate of about 10 ml ethanol/hr. A desired therapeutic level of ethanol in blood is 100 mg/dl. Hemodialysis may be required. Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. The mechanism of production has not been elucidated, but it appears to be noncardiogenic in origin in several cases. Respiratory support with mechanical ventilation and positive end-expiratory pressure may be required.

SECTION VI - REACTIVITY DATA

STABILITY: Stable.
CONDITIONS TO AVOID: None.
INCOMPATABILITY: Strong acids. Strong bases at high temperatures. Oxidizing agents. Materials reactive with hydroxyl compounds.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide. Carbon dioxide.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: None.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contact local authorities.
WASTE DISPOSAL: Incineration in accordance with all federal, state, and local regulations.

SECTION VIII - SAFE HANDLING AND USE INFORMATION

RESPIRATORY PROTECTION: None required in normal use.
VENTILATION: General (mechanical) room ventilation to maintain vapor levels below TLV is expected to be satisfactory.
PROTECTIVE GLOVES: Consult the glove manufacturer for the most appropriate glove material.
EYE PROTECTION: Chemical safety goggles.
OTHER PROTECTIVE EQUIPMENT: Eye bath and safety shower.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: DANGER! May be fatal if swallowed. Cannot be made nonpoisonous. Avoid contact with eyes, skin, and clothing. Do not breathe vapor or mist. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed. Do not take internally.
FOR INDUSTRY USE ONLY.
OTHER PRECAUTIONS: None.

Section 313 Supplier Notification

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	Percent by Weight
107-21-1	ETHYLENE GLYCOL	52.7%

This information must be included in all MSDSs that are copied and distributed for this material.