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Canadian Workplace Hazardous Materials Information System Material Safety Data Sheet

I. PRODUCT IDENTIFICATION

Product Name: 18E HEAVY DUTY RADIATOR CLEANER 32 FO BO
Item No: 80030
Product Type: Cleaner

II. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	LD50/oral/rat	LC50/inhalation/rat	ACGIH; TLV-TWA
WATER 7732-18-5	40-80	not available	not available	
HYDROCHLORIC ACID 7647-01-0	10-40	700 mg/kg	3124 ppm/1H	

III. PHYSICAL DATA

Physical State/Appearance: Green liquid
Odour & Odour Threshold: Sharp, irritating
Specific Gravity: 1.1
Evaporation Rate: <1 (butyl acetate = 1)
Vapour Pressure: Not determined
Vapour Density: Heavier than air
Freezing Point: Not determined
pH: Not determined
Octanol/Water Coefficient: Not determined
Boiling Point: 100°C (212°F)

IV. FIRE AND EXPLOSIVE DATA

Recommended Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.
Hazardous Combustion Products: Irritating organic vapours.
Sensitivity to Static Discharge: Sensitivity to static discharge is not expected.
Conditions of Flammability: Not flammable, but hydrogen gas may be liberated if product contacts powdered metals or metals at temperatures above 85 degrees C.
Flash Point/Range: None
Autoignition Temperature: Not determined
Upper Explosive Limit: Not determined
Lower Explosive Limit: Not determined

V. REACTIVITY DATA

Conditions Causing Chemical Instability: None
Materials to avoid: Active metals, caustic materials such as lime, soda ash, caustic soda, strong alkalies, oxidizing or reducing agents.
Conditions of Reactivity: None
Hazardous Decomposition Products: Hydrogen gas

VI. HAZARDS IDENTIFICATION

Primary Routes of Exposure: Eye and skin contact, ingestion, inhalation
Existing Conditions Aggravated by Exposure: None known
Toxicity Information: (See Effects of Acute Exposure to Product)
Effects of Acute Exposure: Extremely corrosive to eyes and skin. Fumes are irritating. Breathing high concentrations may be dangerous. Extremely corrosive by ingestion. Large quantities could cause severe pain, nausea, death. See (Effects of Acute Exposure to Product).
Effects of Chronic Exposure: See (Effects of Acute Exposure to Product).
Irritancy of Product: Contact causes severe skin irritation and possible burns. Ingestion causes burns of the upper digestive and respiratory tracts.
Sensitization to Product: (See Effects of Acute Exposure to Product)

VI. HAZARDS IDENTIFICATION

Carcinogenicity: (See Effects of Chronic Exposure to Product)
Reproductive Toxicity: (See Effects of Chronic Exposure to Product)
Teratogenicity: (See Effects of Chronic Exposure to Product)
Mutagenicity: (See Effects of Chronic Exposure to Product)
Toxicologically Synergistic Products: None known
WHMIS Hazard Class: E CORROSIVE MATERIAL, D2B TOXIC MATERIALS

VII. PREVENTATIVE MEASURES

Personal Protection

Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Skin: Heavy rubber gloves needed.
Ventilation: Sufficient mechanical ventilation to maintain exposures below the TLV, but general mechanical ventilation is not recommended as the sole means of controlling exposure. Make up air should always be supplied to balance air exhausted.
Engineering Controls: In case of insufficient ventilation, wear an organic vapor respirator.
Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Prevent from entering waterways or sewers. Wear appropriate protective and respiratory equipment.
Protection of Man and Environment: Follow Canadian and local regulations for disposal.
Handling Procedures and Equipment: Store in a dry area below 35°C. Keep container closed when not in use. Avoid breathing vapours. Use with adequate ventilation. Wear all appropriate personal protective equipment.
Special Handling Information: Avoid prolonged breathing of vapor. Keep away from eyes. Avoid prolonged contact with skin. Do not smoke while using. Wash hands after use. Eye wash station should be close by in case of contact with eyes. Do not use for prolonged periods in confined area without adequate ventilation.

VIII. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Drink water or milk. Seek medical attention immediately. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.
Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention..
Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.
Eye Contact: Flush eyes with clean water for at least 20 minutes while gently holding eyelids open, lifting upper and lower lids. Get immediate medical attention.

IX. SHIPPING INFORMATION

Canadian Transportation of Dangerous Goods

Proper Shipping Name: Hydrochloric acid solution
Hazard Class: Class 8, PG II
UN/ID No: UN 1789

IATA

Proper Shipping Name: Hydrochloric acid solution
Class or Division: Class 8, PG II
UN/ID Number: UN1789

IMDG

Proper Shipping: Hydrochloric acid solution
Hazard Class: Class 8, PGII
UN Number: UN 1789

X. PREPARATION INFORMATION

Estimated HMIS Classification: HEALTH 3, FLAMMABILITY 0, PHYSICAL HAZARD 0
HMIS is a registered trademark of the National Paint and Coatings Assn.

Estimated NFPA Rating: HEALTH 3, FLAMMABILITY 0, REACTIVITY 1
NFPA is a registered trademark of the National Fire Protection Assn.

Prepared By: Denise Boyd, Manager-Environmental, Health & Safety

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Company:

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X. PREPARATION INFORMATION

Revision Number: 4

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