

MATERIAL SAFETY DATA SHEET FOR RADNOR® COOLING FLUID LOW TEMPERATURE**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME : RADNOR® COOLING FLUID LOW TEMPERATURE
PRODUCT USE : COOLING FLUID
PART NUMBER(S) : 64000246, 64000248
ADDRESS : RADNOR WELDING PRODUCTS
259 N. RADNOR-CHESTER ROAD SUITE 100
RADNOR, PA 19087-5283
EMERGENCY TELEPHONE : 866-734-3438
PREPARATION DATE : JULY 01, 2009
OSHA REGULATORY STATUS : REGULATED
WHMIS CLASSIFICATION : D2A

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS	OSHA PEL	ACGIH TLV	LD50 SPECIES/ROUTE	LC50 SPECIES/ROUTE	%WT
ETHYLENE GLYCOL	107-21-1	50 ppm	100 ppm	4700 mg/kg (rat) oral	N/Av	30-60%

SECTION 3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

EYE: May possibly cause minor eye irritation.

SKIN: Liquid may cause irritation. Extent of absorption through undamaged skin is unknown, but may be significant in extensive exposure, with symptoms similar to ingestion (see below).

INGESTION: Contains ethylene glycol, known to be toxic to humans.

INHALATION: Vapor concentrations are normally too low at room temperature (low vapor pressure) to cause significant toxic effects from vapor alone. Exposure to vapor and mists is possible, however at elevated temperatures. Vapor and mists can cause irritation of the nose and throat.

EFFECTS OF ACUTE EXPOSURE: N/Av

EFFECTS OF CHRONIC EXPOSURE: Ethylene glycol may have reproductive hazards, and is also associated with development of bladder and kidney stones.

OTHER IMPORTANT HAZARDS: None

SUGGESTED HMIS RATING: HEALTH | 2 | FLAMMABILITY | 0 | REACTIVITY | 0 | PERSONAL PROTECTION | B |

SECTION 4. FIRST AID MEASURES

INHALATION: If someone has difficulty breathing after exposure to product, remove him or her to fresh air immediately. If breathing difficulty persists, contact a doctor.

INGESTION: If swallowed, do not induce vomiting. Get medical attention right away.

EYE CONTACT: For eye contact, flush with water for at least 15 minutes, occasionally lifting lids. Call physician right away.

SKIN CONTACT: For skin contact, wash with soap and water. Call physician if irritation persists.

SECTION 5. FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: Not flammable under normal conditions. Product is water based.

MEANS OF EXTINCTION: N/Av

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/Av

FLASH POINT / DETERMINATION: None

UPPER FLAMMABLE LIMIT: None

LOWER FLAMMABLE LIMIT: None

AUTO-IGNITION TEMPERATURE: Not known.

HAZARDOUS COMBUSTION PRODUCTS: If water component is driven off, and residue ignited, this product may release carbon dioxide, carbon monoxide, and oxides of nitrogen and sulphur.

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: Not sensitive.

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: Will not be ignited by exposure to static.

SECTION 6. ACCIDENTAL RELEASE MEASURES

LEAK / SPILL RESPONSE: Ensure that all spilled material is promptly cleaned up. Absorb with inert material such as vermiculite or paper towels, place in a chemical waste container for eventual disposal. Seal and label the container as waste. Dispose of in accordance with all federal, state, provincial and local regulations.

SPECIAL INSTRUCTIONS: Avoid contact with eyes, or prolonged contact with skin. Wash thoroughly after handling. Keep away from food, and out of reach of small children.

SECTION 7. HANDLING AND STORAGE

HANDLING PROCEDURES / EQUIPMENT: Keep containers closed when not in use.

STORAGE REQUIREMENTS: Store in a cool, dry area away from water-reactive chemicals such as sodium and potassium.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses with side shields, or chemical splash goggles, are recommended when handling this product.

SKIN PROTECTION: Protective gloves not normally required. People with sensitive skin may prefer to wear water-proof gloves, such as rubber or neoprene, to avoid skin contact.

ENGINEERING CONTROLS: No special ventilation requirements. Special respiratory protection is not required for normal conditions of use of this product.

EXPOSURE GUIDELINE LEVELS: For ethylene glycol: OSHA PEL: 50 ppm. ACGIH-CEILING: 100 ppm.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	: Liquid
ODOR AND APPEARANCE	: No odour, clear liquid
ODOR THRESHOLD	: Not applicable
SPECIFIC GRAVITY (H ₂ O=1)	: 1.066
VAPOUR PRESSURE (mm HG)	: Approximately that of water (24 mm Hg)
VAPOUR DENSITY (AIR=1)	: 0.610
EVAPORATION RATE (BA=1)	: 1.0
BOILING POINT (°F)	: Approximately 200°F (93°C)
FREEZING POINT (°F)	: Approximately -32°F (-35°C)
pH	: 6.0
COEFFICIENT OF WATER/OIL DISTRIBUTION	: N/Av
DENSITY	: 1.066
SOLUBILITY IN WATER	: Soluble
% VOLATILE BY VOLUME	: N/Av
VOC'S	: Less than 1

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Normally stable.

CONDITIONS TO AVOID: Excessive heating.

MATERIALS TO AVOID (INCOMPATIBILITIES): Water-reactive chemicals such as sodium or potassium.

CONDITIONS OF REACTIVITY: N/Av

HAZARDOUS DECOMPOSITION BYPRODUCTS: If heated until water is driven off and decomposition begins, this product may release carbon dioxide, carbon monoxide, and oxides of nitrogen and sulphur.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11.TOXICOLOGICAL INFORMATION

LD50: N/Av
LC50: N/Av
ROUTES OF ENTRY: INHALATION[N] EYE CONTACT[Y] SKIN CONTACT[N] SKIN ABSORPTION[N] INGESTION[N]
EXPOSURE LIMITS: N/Av
IRRITANCY OF PRODUCT: Not known to be irritating.
SENSITIZATION TO PRODUCT / MEDICAL CONDITIONS AGGRAVATED: Only two cases have been reported of allergies associated with exposure to ethylene glycol.
CARCINOGENICITY: No ingredients known to be carcinogens.
TERATOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICITY: No effects determined.
TOXICOLOGICAL DATA: LD₅₀ for ethylene glycol: 4700 mg/kg (rat).

SECTION 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS: Not know. Not expected to have serious environmental effects in small quantities.
IMPORTANT ENVIRONMENTAL CHARACTERISTICS: None known. Product is water-based.
AQUATIC TOXICITY: Not known. Expected to have minimal toxicity.

SECTION 13. DISPOSAL CONSIDERATIONS

Place in a sealed container and label as waste. Place in a safe area, and comply with all federal, state, provincial and local regulations for disposal.

SECTION 14. TRANSPORTATION INFORMATION

SPECIAL SHIPPING INFORMATION : None

DOT HM-181 SHIPPING INFORMATION

PROPER SHIPPING NAME : Not regulated

HAZARD CLASS OR DIVISION : none

UN NUMBER : none

PACKAGING GROUP : none

LABEL(S) REQUIRED : none

TDG SHIPPING INFORMATION

TDG SHIPPING NAME : Not regulated

TDG CLASSIFICATION : none

UN NUMBER : none

PACKING GROUP : none

LABEL(S) REQUIRED : none

NAERG : none

EMERGENCY TELEPHONE NUMBER : (613) 996-6666

INTERNATIONAL TRANSPORT INFORMATION

PROPER SHIPPING NAME : Not regulated

CLASS OR DIVISION : none

SUBSIDIARY RISK : none

HAZARDOUS LABEL(S) : none

PACKAGING GROUP : none

UN OR ID NUMBER : none

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA): The product on this MSDS, or all of its components, is listed under TSCA.

SARA TITLE III, SECTION 313: The following ingredients are subject to the reporting requirements of section 313 of Title III of the Superfund and Reauthorization Act of 1986 and 40 CFR Part 372: None

CLEAN AIR ACT (CAA): The following ingredients appear on the List of Hazardous Air Pollutants (HAP – 42 USC 7412, Title I, Part A, p112): None

CLEAN WATER ACT (CWA):The following ingredients appear on the CWA List of Hazardous Substances (40 CFR 116.4): None

CALIFORNIA PROPOSITION 65: The following ingredients appear on the Proposition 65 list(s): None

CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

DOMESTIC SUBSTANCES LIST (DSL): The product on this MSDS, or all of its components, is included in the DSL.

SECTION 16. OTHER INFORMATION

N/E	Not Established
N/Av	Not Available
N/Ap	Not Applicable
IARC	International Agency for Research on Cancer
ACGIH	American Conference of Governmental Industrial Hygienists
NIOSH	National Institute for Occupational Health and Safety
TLV-TWA	Threshold Limit Values, Time Weighted Average
NAERG	North American Emergency Response Guidebook
WHMIS	Workplace Hazardous Materials Information System

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