

PRODUCT: SAFE-T-THERM HD 100%

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: T. DONOVAN & SON (1997) LTD.
700 WILSON STREET
SAINT JOHN, NEW BRUNSWICK
CANADA E2M 3V2
TOLL FREE: 1-888-799-2645 / LOCAL (506) 642-1500

PRODUCT NAME: Safe-T-Therm HD 100%.

CHEMICAL FAMILY: Propylene Glycol Mixture.

MATERIAL USE: Heat Transfer Fluid.

EMERGENCY PHONE NUMBER: (613)-996-6666

SECTION 02: HAZARDS IDENTIFICATION

SIGNAL WORD: Not Applicable.

HAZARD CLASSIFICATION: Not Applicable.

HAZARD STATEMENT: While this material is not considered hazardous by Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR (Code of Federal Regulations) 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of this product.

PRECAUTIONARY STATEMENT: **P210:** Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P273: Avoid release to the environment.
P233: Keep container tightly closed.
P403 + P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of contents/container according to local, Provincial, and/or Federal regulations.

OTHER HAZARDS: Not Applicable.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS #	WT. %
Propylene Glycol	57-55-6	95
Water	7732-18-5	2.5
Inhibitors & Dye	Proprietary	2.5

Definitions:

CAS - Chemical Abstract Service registry number.

WT. % - Percent Weight.

SECTION 04: FIRST AID MEASURES

IF INHALED: Vapours and mists expected to be slightly irritating to upper respiratory tract.

IN CASE OF SKIN CONTACT: Irritation may result.

IN CASE OF EYE CONTACT: Irritation may cause transitory stinging and tearing.

IF SWALLOWED: Very low toxicity if ingested. Ingestion of larger amounts may cause gastrointestinal upset and possible temporary central nervous system depression.

THE MOST IMPORTANT SYMPTOMS AND EFFECTS, WHETHER ACUTE OR DELAYED: Irritation of affected area.

FIRST AID INSTRUCTION: Inhalation: Remove to fresh air. If symptoms persist, seek medical attention.
Skin: Wash skin with soap and water. Remove any contaminated clothing. Seek medical attention if irritations develop or persists.
Eye Contact: Flush with water for at least 20 minutes. Seek medical attention if irritations develop or persists.
Ingestion: DO NOT induce vomiting, seek medical attention.

PRODUCT: SAFE-T-THERM HD 100%

SECTION 05: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:	Water, water fog, water spray, alcohol foam, dry chemical or carbon dioxide.
UNSUITABLE EXTINGUISHING MEDIA:	No Data Available.
HAZARDOUS COMBUSTION PRODUCTS:	Smoke may contain the original material in addition to but not limited to: oxides of phosphorus, potassium, carbon, nitrogen, sulphur and hydrogen chloride.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:	Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas and keep upwind of fire.
PERSONAL PROTECTIVE EQUIPMENT:	Usage of safety glasses or goggles is recommended. Chemical resistant gloves, chemical resistant apron, boots, and full suit will be necessary depending on the extent of clean up task. If ventilation does not control airborne concentration, then respiratory protection equipment that meets Occupational Safety and Health Administration (OSHA) 29 CFR 1910.134 and American National Standards Institute (ANSI) Z88.2 requirements should be used.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:	Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment.
ENVIRONMENTAL PRECAUTIONS:	Do not flush to sewer.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP:	Collect liquid in an appropriate container or absorb with inert material and place in chemical waste container.
CLEANUP PROCEDURES:	Do not flush to sewer. Comply with all Federal, Provincial, and local regulations.

SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	Protect container from physical damage. Wear appropriate personal protective equipment. Do not expose containers to open flame, excessive heat, or direct sunlight. Use local exhaust over processing area. Do not eat, drink, or smoke around products.
CONDITIONS FOR SAFE STORAGE:	Store in a cool, dry and ventilated area away from sources of heat, moisture and incompatible materials. Observe all warnings and precautions listed for the product. Keep container closed to prevent contamination.

SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Permissible Exposure Limits (PELs):	Not Applicable.
American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV):	Not Applicable.
American Industrial Hygiene Association (AIHA) Workplace Environmental Exposure Levels (WEEL):	10 mg/m ³ for total vapour and aerosol.
ENGINEERING CONTROLS:	Use mechanical (general) ventilation to control airborne levels below exposure guidelines.
INDIVIDUAL PROTECTION MEASURES:	Wear protective safety glasses or goggles, gloves, apron, and vapour respirator.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Clear Orange, Liquid.
ODOUR:	Slight to no Odour.
ODOUR THRESHOLD:	Not Applicable.
PH:	9.0 - 10.7.
FREEZING POINT:	-31°C/-23°F (as 50%).
BOILING POINT:	155°C/311°F.
FLASH POINT, METHOD:	107°C/225°F.
EVAPORATION RATE:	<1 (Butyl Acetate = 1).
FLAMMABILITY (SOLIDS AND GASES):	Not Flammable.

PRODUCT: SAFE-T-THERM HD 100%

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

UPPER FLAMMABLE LIMIT (% BY VOL):	12.5%.
LOWER FLAMMABLE LIMIT (% BY VOL):	2.6%.
EXPLOSIVE LIMITS:	Not Explosive.
VAPOUR PRESSURE:	133 Pa / 0.1 mmHg.
VAPOUR DENSITY (AIR=1):	2.1.
SPECIFIC GRAVITY (WATER=1):	1.057 - 1.067.
SOLUBILITY IN WATER (% W/W):	Miscible in Water.
AUTO IGNITION TEMPERATURE:	>370°C >700°F.
PARTITION COEFFICIENT N-OCTANOL/WATER:	No Data Available.
DECOMPOSITION TEMPERATURE:	Not Applicable.
VISCOSITY:	~75 cps at 60°F.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	This product is stable under typical use temperatures.
CHEMICAL STABILITY:	This product is stable under typical use temperatures.
POSSIBILITY OF HAZARDOUS REACTIONS:	Avoid contact with oxidizing materials and strong acids.
CONDITIONS TO AVOID:	Heat, flames, ignition sources and incompatibles.
INCOMPATIBLE MATERIALS:	Avoid contact with oxidizing agents and strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon dioxide and carbon monoxide may form when heated to decomposition. Aldehydes, alcohols or other organic acids may also be formed.

SECTION 11: TOXICOLOGICAL INFORMATION

LIKELY ROUTS OF EXPOSURE:	Eyes, Skin, Ingestion, and Inhalation.
ACUTE TOXICITY:	
ORAL LD50:	LD50 for Rat is 20,000 mg/kg.
INHALATION LC50:	No Data Available.
DERMAL LD50:	LD50 for skin absorption in <i>Leporidae sp.</i> (Rabbit) is >10,000 mg/kg.
DELAYED EFFECTS (SHORT TERM / LONG TERM EXPOSURE):	Irritation of affected area.
IMMEDIATE EFFECTS (SHORT TERM / LONG TERM EXPOSURE):	Irritation of affected area.
CHRONIC EFFECTS (SHORT TERM / LONG TERM EXPOSURE):	Not Applicable / Lactic acidosis, stupor and seizures have been reported following chronic ingestion.
GERM CELL MUTAGENICITY:	No Data Available.
CARCINOGENICITY:	<ul style="list-style-type: none"> • Not listed in the National Toxicology Program (NTP). • Not identified as a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs. • Not identified as a potential carcinogen by OSHA.
REPRODUCTIVE TOXICITY:	No Data Available.
SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE:	No Data Available.
STOT - REPEAT EXPOSURE:	No Data Available.
ASPIRATION HAZARD:	No Data Available.
DESCRIPTION OF SYMPTOMS:	Irritation of affected area. Lactic acidosis, stupor and seizures have been reported following chronic ingestion.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:	Low Ecotoxicity.
PERSISTENCE AND DEGRADABILITY:	Biodegradable.
BIOACCUMULATIVE POTENTIAL:	Does not bioaccumulate significantly.

PRODUCT: SAFE-T-THERM HD 100%

SECTION 12: ECOLOGICAL INFORMATION

MOBILITY IN SOIL: Dissolves in water. If product enters soil, it will be highly mobile and may contaminate groundwater.

OTHER ADVERSE EFFECTS: No Data Available.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Do not dump into sewers, on ground or into any bodies of water. Contact local sewer, municipal, Provincial, and/or Federal agencies to determine appropriate disposal options.

PACKAGING: No Data Available.

SECTION 14: TRANSPORT INFORMATION

Transportation of Dangerous Goods (TDG): Not Regulated.

United States (US) Department of Transportation (DOT): Not Regulated.

International Maritime Dangerous Goods (IMDG): Not Regulated.

International Air Transport Association (IATA): Not Regulated.

UNITED NATIONS (UN) NUMBER: Not Applicable.

TRANSPORT HAZARD CLASS: Not Applicable.

PACKING GROUP: Not Applicable.

PROPER SHIPPING NAME: Not Applicable.

SPECIAL SHIPPING INSTRUCTIONS: None.

REGULATION SPECIFIC INFORMATION:

In Accordance with US DOT: Is not regulated under Non-bulk Packaging.

In Accordance with IMDG: Transport in bulk according to Annex II of MARPOL (International Convention for the Prevention of Pollution from Ships) 73/78 and the International Bulk Chemical Code (IBC Code) Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not Regulated.

Not identified as a marine pollutant according to IMDG Code.

SECTION 15: REGULATORY INFORMATION

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CLASSIFICATION: This is not a WHMIS controlled product.

HAZARDOUS PRODUCT REGULATIONS (HPR) COMPLIANCE: This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

CANADIAN DOMESTIC SUBSTANCE LIST (DSL): All substances contained in this product are listed on the DSL or are not required to be listed.

UNITED STATES (US) FEDERAL REGULATIONS:

OSHA Hazard Communication Standard: This is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act (SARA): SARA 311/312 Hazard Categories:
 Immediate (Acute) Health Hazard: No.
 Delayed (Chronic) Health Hazard: No.
 Fire Hazard: No.
 Sudden Release of Pressure Hazard: No.
 Reactive Hazard: No.

SARA 313, to the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

United States Toxic Substances Control Act (TSCA) Inventory: All components of this product are on the TSCA Inventory or are except from TSCA inventory requirements under 40 CFR 720.30.

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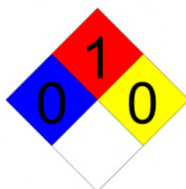
SECTION 16: OTHER INFORMATION

Hazardous Materials Identification System (HMIS) Hazard ID:

HEALTH	0
FLAMABILITY	1
REACTIVITY	0
PERSONAL PROTECTION	X

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; *-Chronic health effect

National Fire Protection Association (NFPA):



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

PREPARED BY: T. Donovan & Son (1997) Ltd.
PREPARATION DATE: May 2018.

DISCLAIMER:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Regulatory requirements are subject to change and may differ between various locations. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.