

SAFETY DATA SHEET

HD6900
DOWFROST HEAT TRANSFER FLUID

Preparation Date: 28/Sep/2020

Version: 2

1. IDENTIFICATION

Product identifier

Product Name DOWFROST HEAT TRANSFER FLUID

Other means of identification

SDS Number HD6900

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Intended as a heat transfer fluid for closed-loop systems.

Restricted Uses No information available

Initial Supplier Identifier

Hood Chemical
296 Alliance Rd. #14
Milton, On. L9T 4W8
Telephone: 1-800-567-9791

Emergency telephone number

24 Hour Emergency Phone Number (CANUTEC): 1-888-226-8832 (1-888-CAN-UTEC)

2. HAZARD IDENTIFICATION

Hazardous Classification of the substance or mixture

None

Label elements

Hazard pictograms None

Hazard statements

The mixture does not meet the criteria for classification.

Prevention

Wash hands thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

In case of inadequate ventilation wear respiratory protection

Response

Read the label and safety data sheet before use.

Flush eyes with plenty amounts of water.

If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash skin with plenty of water.

If skin irritation occurs: Get medical advice/attention

Move person to fresh air.

Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Storage

Store locked up

Store in accordance with good industrial practices.

Disposal

Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable.

Mixture

Chemical Name	CAS No	Weight-% (W/W)	Synonyms
Propylene glycol	57-55-6	90 - 100%	Propylene glycol
Water	7732-18-5	0 - 10%	Water
Dipotassium phosphate	7758-11-4	0 - 10%	Dipotassium phosphate

4. FIRST-AID MEASURES**Description of first aid measures****Inhalation**

Remove to fresh air.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

Wash skin with soap and water.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed:

May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. At room temperature, exposure to vapor is minimal due to low volatility. Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. Mist may cause irritation to upper respiratory tract (nose and throat). Prolonged contact is essentially non irritating to skin. Repeated contact may cause flaking and softening of skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Indication of any immediate medical attention and special treatment needed:**Note to physicians**

Treatment based on sound judgment of physician and individual reactions of patient.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water fog or fine spray, carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Do not use direct water stream, which will spread fire.

Specific hazards arising from the substance or mixture

Use water spray to cool fire-exposed containers and structures. Isolate and restrict area access. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Container may rupture from gas generation in a fire situation. Fight fire from a safe distance and from a protected location. Consider use of unmanned hose holder or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from the end of tanks.

Hazardous combustion products

Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Alcohols. Ethers. Aldehydes. Organic acids.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Environmental precautions

See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

7. HANDLING AND STORAGE

Precautions for safe handling

Keep the containers closed when not in use. Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion.

Conditions for safe storage, including any incompatibilities

Store in original container. Do not store in unlabeled containers. Do not store in galvanized steel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical Name	Alberta OEL	British Columbia OEL	Ontario	Quebec OEL	Exposure Limit - ACGIH	Immediately Dangerous to Life or Health - IDLH
Propylene glycol 57-55-6	Not available	Not available	TWA: 10 mg/m ³ TWA: 50 ppm TWA: 155 mg/m ³	Not available	Not available	Not available
Water 7732-18-5	Not available	Not available	Not available	Not available	Not available	Not available
Dipotassium phosphate 7758-11-4	Not available	Not available	Not available	Not available	Not available	Not available

Consult local authorities for recommended exposure limits

Appropriate engineering controls

Engineering controls

Local exhaust ventilation as necessary to maintain exposures to within applicable limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side shields or chemical goggles.

Hand protection

Use gloves chemically resistant to this material, examples of preferred glove barrier materials include: Butyl rubber gloves. Nitrile gloves. Neoprene gloves. Polyvinyl alcohol gloves. Ethyl Vinyl Alcohol Laminate (EVAL). Natural rubber gloves. Polyvinylchloride (PVC) gloves. Polyethylene gloves. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials as well as the instructions/specifications provided by the glove supplier.

Skin and body protection

Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Respiratory protection

If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. In case of spill or leak resulting in unknown concentration, use a NIOSH approved supplied air respirator. Organic vapor cartridge with a particulate pre-filter.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties**Appearance**

Physical state	Liquid
Color	Colorless
Odor	Characteristic
Odor threshold	No information available

PROPERTIES**Values****Remarks • Method**

pH	10 (@ 50%)	
Melting point / freezing point	No data available	(Supercools; freezing point may therefore vary)
Initial boiling point/boiling range	152 °C / 306 °F	
Flash point	104 °C / 219 °F	Pensky-Martens Closed Cup
Evaporation rate	<0.5	
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit:	12.5	
Lower flammability limit:	2.6	
Vapor pressure	2.2 mmHg	
Relative vapor density	>1.0	
Specific Gravity	1.05 @ 20 °C	
Water solubility	Completely soluble	
Solubility in other solvents	No data available	
Partition coefficient	No data available	
Autoignition temperature	371 °C / 700 °F	
Decomposition temperature	No data available	None known
Kinematic viscosity	Kinematic viscosity 43.4 cSt @ 20°C	
Dynamic viscosity	No data available	None known
Explosive properties	No information available.	
Oxidizing properties	No information available.	
Molecular weight	76.9 g/mol	
VOC Percentage Volatility	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. STABILITY AND REACTIVITY

Reactivity/Chemical Stability

Stable under normal conditions

Possibility of hazardous reactions

No additional remark.

Hazardous polymerization

Will not occur.

Conditions to avoid

Product can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.

Incompatible materials

Strong oxidizers. Strong bases. Strong acids.

Hazardous decomposition products

Hazardous decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Alcohols. Ethers. Aldehydes. Organic acids.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Inhalation**

At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation to upper respiratory tract (nose and throat).

Eye contact

May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

Skin contact

Prolonged contact is essentially non irritating to skin. Repeated contact may cause flaking and softening of skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Information on toxicological effects**Symptoms**

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 20,833.00 mg/kg
ATEmix (dermal) 21,667.00 mg/kg

Unknown acute toxicity No information available

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Propylene glycol 57-55-6	= 20 g/kg (Rat)	= 20800 mg/kg (Rabbit)	Not available
Water 7732-18-5	> 90 mL/kg (Rat)	Not available	Not available
Dipotassium phosphate 7758-11-4	Not available	Not available	Not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Prolonged contact is essentially non irritating to skin. Repeated contact may cause flaking and softening of skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Serious eye damage/eye irritation

May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

For this family of materials: Did not cause cancer in laboratory animals.

Chemical Name	ACGIH	IARC	NTP	OSHA
Propylene glycol 57-55-6	Not available	Not available	Not available	Not available
Water 7732-18-5	Not available	Not available	Not available	Not available
Dipotassium phosphate 7758-11-4	Not available	Not available	Not available	Not available

Reproductive toxicity

For the major component(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative. For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Specific target organ systemic toxicity - single exposure

No information available.

Specific target organ systemic toxicity - repeated exposure

No information available.

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Fish Species Data	Toxicity to microorganisms	Crustacea
Propylene glycol 57-55-6	19000 mg/L EC50 Pseudokirchneriella subcapitata 96 h	41 - 47 mL/L LC50 (Oncorhynchus mykiss) 96 h static 51400 mg/L LC50 (Pimephales promelas) 96 h static 51600 mg/L LC50 (Oncorhynchus mykiss) 96 h static 710 mg/L LC50 (Pimephales promelas) 96 h	Not available	EC50: >1000mg/L (48h, Daphnia magna) EC50: >10000mg/L (24h, Daphnia magna)
Water 7732-18-5	Not available	Not available	Not available	Not available

Dipotassium phosphate 7758-11-4	Not available	Not available	Not available	Not available
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Persistence and degradability No information available.

Bioaccumulation No information available.

Chemical Name	Partition coefficient
Propylene glycol 57-55-6	Not available
Water 7732-18-5	Not available
Dipotassium phosphate 7758-11-4	Not available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Do not reuse empty containers.

14. TRANSPORT INFORMATION

TDG (Canada):

UN Number Not applicable
Shipping name Not regulated
Class Not applicable
Packing Group Not applicable
Marine pollutant Not available.

DOT (U.S.)

UN Number Not applicable
Shipping name Not regulated
Class Not applicable
Packing Group Not applicable
Marine pollutant Not available

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Regulatory Rules

Chemical Name	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Propylene glycol - 57-55-6	Not Listed	Not Listed	Not Listed
Water - 7732-18-5	Not Listed	Not Listed	Not Listed
Dipotassium phosphate - 7758-11-4	Not Listed	Not Listed	Not Listed

International Inventories

TSCA All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

DSL/NDSL All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION

<u>NFPA:</u>	Health hazards 0	Flammability 1	Instability 0	Physical and chemical properties -
<u>HMIS:</u>	Health hazards 0	Flammability 1	Physical hazards 0	Personal protection X

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling

Maximum limit value

*

Skin designation

Prepared By: The Environment, Health and Safety Department of Univar Canada Ltd.

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End of Safety Data Sheet

Region	The following sections have been revised: Revision Note 2.0	Canada
Template name	HGHS	
Inhalation Statement	Liquid or Aerosol	
Inhalation	At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation to upper respiratory tract (nose and throat).	
Conditions to avoid	None anticipated Avoid contact with metals such as: zinc, magnesium, aluminum and galvanized metals. Do not expose material to low temperatures because of dangers associated with freezing.	
Possibility of hazardous reactions	No additional remark.	
Note to physicians	Treatment based on sound judgment of physician and individual reactions of patient.	
Suitable Extinguishing Media	Extinguish fires with water spray or apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires.	
Advice on safe handling	Containers which have been exposed to heat may be under internal pressure. These should be cooled and carefully vented before opening. For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment.	
Storage Conditions	Do not store above 49°C (120°F). Separate from acids, reactive metals and ammonium salts. Do not store below 5 °C.	
Engineering controls	Local exhaust ventilation as necessary to maintain exposures to within applicable limits.	
Eye/face protection	Safety glasses (with side shields).	
Hand protection	Butyl rubber gloves. Nitrile gloves. Neoprene gloves. Polyvinyl alcohol gloves. Ethyl Vinyl Alcohol Laminate (EVAL). Avoid natural, butyl and neoprene rubbers. Avoid prolonged contact with nitrile rubber and PVC. Substantial leather work gloves. Polyvinylchloride (PVC) gloves. Natural rubber gloves. Teflon(R).	
Respiratory protection	Cartridge respirator. A NIOSH approved air purifying respirator with organic vapor cartridges and particulate prefilter.	

pH	10 (@ 50%)
Kinematic viscosity - VALUE 1	Kinematic viscosity 43.4 cSt @ 20°C
Physical state	Liquid
Flash point °C - VALUE 1	104
Boiling point / boiling range °C - VALUE 1	152
Flash Point:	&104&219 &(Propylene glycol)&&&

GHS Classification

Not Hazardous	Not classified						
GHS Physical Hazard Category Number	None						
Component	Exclude this non-hazardous chemical from toxicity and ecotoxicity calculations for LD/LC/EC50	mg/kg oral LD50 (rat)	LD50 (Dermal, Rat, mg/kg)	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - gas - ppm	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L
Propylene glycol 57-55-6 (90 - 100%)	-	-	-	-	-	-	-
Water 7732-18-5 (0 - 10%)	-	-	-	-	-	-	-
Dipotassium phosphate 7758-11-4 (0 - 10%)	-	-	-	-	-	-	-

Hazard statements EUH210 - Safety data sheet available on request
 The mixture does not meet the criteria for classification.
 Skin IF ON SKIN: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention
 Prevention Wash hands thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection In case of inadequate ventilation wear respiratory protection
 Response Read the label and safety data sheet before use.
 Eyes Flush eyes with plenty amounts of water. If eye irritation persists: Get medical advice/attention

Skin IF ON SKIN: Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention
 Inhalation Move person to fresh air.
 Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Storage Store locked up Store in accordance with good industrial practices.
 Disposal Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	20,833.00
Units	mg/kg
ATEmix (dermal)	21,667.00
Units	mg/kg
Unknown acute toxicity	2 % of the mixture consists of component(s) of unknown hazards to the aquatic environment
Unknown Acute Aquatic Toxicity	2
Unknown Chronic Aquatic Toxicity	2
Product ATE Oral Status	1
Product ATE Dermal Status	1
Product ATE Inhalation - Gas Status	1
Product ATE Inhalation - Vapor Status	1
Product ATE Inhalation - Dust/Mist Status	1
Product Skin Corrosion Status	1
Product Eye Damage Status	1
Product Respiratory Sens. Status	1
Product Skin Sensitization Status	1
Product Mutagenic Status	1
Product Carcinogenic Status	1
Product Reproductive Toxicity Status	1
Product STOT Single Status	1
Product STOT Repeated Status	1
Product Aquatic Toxicity Status	1
Product Aspiration Toxicity Status	1
Product Ozone Status	1
Product and Component Overall	1

Classification Status

Unknown acute toxicity	98
2 % of the mixture consists of ingredient(s) of unknown acute oral toxicity	
2 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity	
98 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)	
98 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)	
98 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)	