

Safety Data Sheet

DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : DOWFROST™ HD 50 Heat Transfer Fluid

Recommended use of the chemical and restrictions on use

Recommended use : Heat-transfer medium.
Reserved for industrial and professional use.

Restrictions on use : None known.

Supplier or Repackaging Details

Company : Univar Solutions USA
Address : 3075 Highland Pkwy Suite 200
Downers Grove, IL 60515
United States of America (USA)

Manufactured By : THE DOW CHEMICAL COMPANY

Emergency telephone number:

Transport North America: CHEMTREC (1-800-424-9300)

CHEMTREC INTERNATIONAL Tel # 703-527-3887

Additional Information: : Responsible Party: Product Compliance Department
E-mail: SDSNA@univarsolutions.com
SDS Requests: 1-855-429-2661
Website: www.univarsolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity : Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H361f Suspected of damaging fertility.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Safety Data Sheet

DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

Other hazards

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 2 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical name	Weight percent
57-55-6	Propylene glycol	50 - 70
64665-57-2	Sodium tolyltriazole	1 - 5

Actual concentration is withheld as a trade secret

Any Concentration shown as a range is due to batch variation.

SECTION 4. FIRST AID MEASURES

General advice : Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Wash off with plenty of water.
If skin irritation persists, call a physician.

In case of eye contact : Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray
Carbon dioxide (CO₂)
Dry chemical
Foam

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : toxic fumes
Carbon oxides
Carbon monoxide

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Special protective equipment : Wear self-contained breathing apparatus for firefighting if nec-

Safety Data Sheet

DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

for firefighters

essary.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.

Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
57-55-6	Propylene glycol	TWA	10 mg/m ³	US WEEL

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Eye protection : Safety glasses

Skin and body protection : Protective suit

Hygiene measures : General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : yellow, green

Odour : characteristic

Safety Data Sheet

DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

Odour Threshold	: No data available
pH	: 9.5
Freezing Point (Freezing Point)	: -33.8 °C (-28.8 °F)
Boiling Point (Boiling point/boiling range)	: 104 °C (219 °F) (1013 hPa)
Flash point	: Not applicable
Evaporation rate	: < 0.5 (Butyl Acetate = 1)
Flammability (solid, gas)	: No data available
Upper explosion limit	: 12.5 %(V)
Lower explosion limit	: 2.6 %(V)
Vapour pressure	: 15.5 mmHg @ 20 °C (68 °F)
Relative vapour density	: > 1(Air = 1.0)
Relative density	: 1.06 @ 20 °C (68 °F) Reference substance: (water = 1)
Density	: No data available
Solubility(ies)	
Water solubility	: completely soluble
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: 371 °C
Thermal decomposition	: No data available
Viscosity	
Viscosity, kinematic	: 6.3 mm ² /s @ 20 - 25 °C (68 - 77 °F)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
	Stable under recommended storage conditions. No hazards to be specially mentioned.
Conditions to avoid	: elevated temperatures
Incompatible materials	: Acids Bases Strong oxidizing agents

Safety Data Sheet
DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Components:**64665-57-2:**

Acute oral toxicity : LD50 (Rat, female): 640 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit): >2000

Skin corrosion/irritation**Components:****64665-57-2:**

Species: Rabbit

Exposure time: 4 h

Result: Causes burns.

Serious eye damage/eye irritation**Components:****64665-57-2:**

Species: Rabbit

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation**Components:****64665-57-2:**

Remarks: No data available

Germ cell mutagenicity**Components:****64665-57-2:**Genotoxicity in vitro : Test Type: Ames test
Species: Salmonella typhimurium
Result: negativeGenotoxicity in vivo : Test Type: In vivo micronucleus test
Species: Mouse
Result: negative

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Safety Data Sheet**DOWFROST™ HD 50 Heat Transfer Fluid**

Version 1.4

Revision Date: 11/11/2023

Carcinogenicity**Components:****64665-57-2:**

Carcinogenicity - Assessment

IARC

: Carcinogenicity classification not possible from current data.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity**Product:**

Reproductive toxicity - Assessment

Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Components:**64665-57-2:**

Reproductive toxicity - Assessment

Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Teratogenicity - Assessment : teratogenicity classification is not possible

Aspiration toxicity**Product:**

No aspiration toxicity classification

Further information**Product:**

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****64665-57-2:**

Toxicity to fish

: LC50 (Cyprinus carpio (Carp)): 55 mg/l
Exposure time: 96 h

Safety Data Sheet

DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

Test substance: Information given is based on data obtained from similar substances.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia galeata (water flea)): 15.8 mg/l
Exposure time: 48 h
Test Type: static test
Test substance: Information given is based on data obtained from similar substances.

Toxicity to algae : EC50 (Skeletonema costatum (marine diatom)): 53 mg/l
Exposure time: 72 h

Acute aquatic toxicity- Assessment : Toxic to aquatic life.

Chronic aquatic toxicity- Assessment : Toxic to aquatic life with long lasting effects.

Persistence and degradability

Product:

Biodegradability : Remarks: Readily biodegradable

Components:

57-55-6:

Biodegradability : anaerobic
Biodegradation: 98 %
Exposure time: 105 d

64665-57-2:

Biodegradability : aerobic

Bioaccumulative potential

Components:

64665-57-2:

Partition coefficient: n-octanol/water : log Pow: 1.083 - 1.091 (25 °C)
pH: 5 - 6

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

Safety Data Sheet**DOWFROST™ HD 50 Heat Transfer Fluid**

Version 1.4

Revision Date: 11/11/2023

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-637-7922
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**DOT (Department of Transportation):** Not regulated as a dangerous good**IATA (International Air Transport Association):** Not regulated as a dangerous good**IMDG-Code:** Not regulated as a dangerous good**SECTION 15. REGULATORY INFORMATION****WHMIS Classification** : : Not Rated**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Reproductive toxicity**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

Safety Data Sheet**DOWFROST™ HD 50 Heat Transfer Fluid**

Version 1.4

Revision Date: 11/11/2023

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

57-55-6 Propylene glycol

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

57-55-6 Propylene glycol
7732-18-5 Water

California Prop 65

: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA : On TSCA Inventory

DSL : All components of this product are on the Canadian DSL

AICS : not determined

NZIoC : not determined

ENCS : not determined

KECI : not determined

PICCS : not determined

IECSC : not determined

Safety Data Sheet

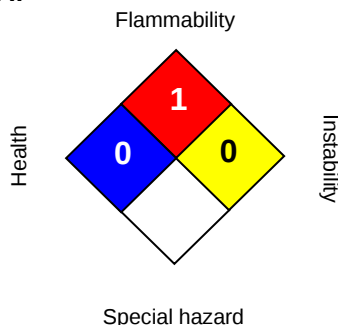
DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661) SDSNA@univarsolutions.com.

Revision Date : 11/11/2023

Material number:

16181373, 16191678, 16177995, 16175294, 16176350, 16169669, 16168247, 16040566, 768238

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing	PICCS	Philippines Inventory of Commer-

Safety Data Sheet

DOWFROST™ HD 50 Heat Transfer Fluid

Version 1.4

Revision Date: 11/11/2023

	Chemical Substances		cial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		