

Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dowfrost HD

Product Use Descrip- : Heat-transfer medium.

tion

Manufacturer or supplier's details

Company : Nexeo Solutions LLC

Address 3 Waterway Square Place Suite 1000

Woodlands, Tx. 77380 United States of America

Emergency telephone number:

Health North America: 1-855-NEXEO4U (1-855-639-3648) Health International: 1-855-NEXEO4U (1-855-639-3648) Transport North America: CHEMTREC 800.424.9300

Additional Infor-

: Responsible Party: Product Safety Group

mation:

E-Mail: msds@nexeosolutions.com SDS Requests: 1-855-429-2661 SDS Requests Fax: 1-281-500-2370 Website: www.nexeosolutions.com

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Potential Health Effects

Carcinogenicity:

IARC 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.

ACGIH No component of this product present at levels greater

than or equal to 0.1% is identified as a carcinogen or

potential carcinogen by ACGIH.

OSHANo component of this product present at levels greater

than or equal to 0.1% is identified as a carcinogen or

potential carcinogen by OSHA.

NTP No component of this product present at levels greater

than or equal to 0.1% is identified as a known or antici-

pated carcinogen by NTP.

MSDS Number: 100000008023 1 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Emergency Overview

Appearance	liquid
Colour	yellow, green
Odour	characteristic
Hazard Summary	No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

CAS-No.	Chemical Name	Concentration (%)
57-55-6	Propylene glycol	90 - 100
7758-11-4	Phosphoric acid, potassium salt (1:2)	1 - 5

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.

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 give milk or alcoholic beverages.

Never give anything by mouth to an unconscious per-

son.

If symptoms persist, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing : Carbon dioxide (CO2)

media Dry chemical

MSDS Number: 100000008023 2 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Foam

Water spray

Unsuitable extinguishing

media

: High volume water jet

Specific hazards during

firefighting

: During a fire, irritating or toxic decomposition prod-

ucts may be generated.

Hazardous combustion

products

: Carbon oxides

Specific extinguishing

methods

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

Further information : Standard procedure for chemical fires.

Special protective equip-

ment for firefighters

: Wear a positive-pressure supplied-air respirator with

full facepiece.

Use personal protective equipment.

NFPA Flammable and Combustible Liquids Classification:

Combustible Liquid Class IIIB

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 safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in

the application area.

Conditions for safe stor-

age

: Electrical installations / working materials must com-

ply 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

MSDS Number: 100000008023 3 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

CAS-No.	Components	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
57-55-6	Propylene glycol	TWA	10 mg/m3	US WEEL

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally

required.

Hand protection

Material : Impervious gloves

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

Odour Threshold : No data available

pH : 9.5 - 10 @ 50 %

Freezing Point : No data available

Boiling Point (Boiling

point/boiling range)

: 152 °C (306 °F)

Flash point : 104 °C (219 °F)

Evaporation rate : < 0.5

n-Butyl Acetate

Flammability (solid, gas) : No data available

Burning rate : No data available

Upper explosion limit : 12.5 %(V)

MSDS Number: 100000008023 4 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Lower explosion limit : 2.6 %(V)

Vapour pressure : 2.2 mmHg

Relative vapour density : > 1.0(Air = 1.0)

Relative density : 1.05 - 1.06 @ 20 °C (68 °F)

Reference substance: (water = 1)

Density : No data available

Bulk density : No data available

Solubility(ies)

Water solubility : soluble

Solubility in other sol-

vents

: No data available

Partition coefficient: n-

octanol/water

: log Pow: -1.07

Auto-ignition temperature : 371 °C

Thermal decomposition : No data available

Viscosity

Viscosity, kinematic : 43.4 mm2/s @ 20 °C (68 °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

: Stable under recommended storage conditions.

No hazards to be specially mentioned.

Conditions to avoid : elevated temperatures

UV light.

Exposure to moisture.

Extremes of temperature and direct sunlight.

Possible emission of gaseous decomposition products

may lead to a dangerous pressure build-up.

MSDS Number: 100000008023 5 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Incompatible materials : Strong acids and strong bases

Strong oxidizing agents

Hazardous decomposition

products

: Aldehydes Alcohols ethers

Organic acids

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

57-55-6:

Acute oral toxicity : LD50 (rat, male and female): 22,000 mg/kg

Method: Standard Acute

Acute inhalation toxicity : LC50 (rabbit): >317042

Exposure time: 2 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute

inhalation toxicity

7758-11-4:

Acute oral toxicity : LD50 (rat, female): > 2,000 mg/kg

Method: OECD Test Guideline 420

GLP: yes

Acute dermal toxicity : LD50 (rabbit, male and female): > 5,000 mg/kg

Method: Fixed dose procedure

Skin corrosion/irritation

Components:

57-55-6:

Species: rabbit Exposure time: 4 h

Method: OECD Test Guideline 404

Result: No skin irritation

7758-11-4:

Species: rabbit Exposure time: 24 h Method: In vivo

Result: Mild skin irritation

GLP: yes

MSDS Number: 100000008023 6 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Serious eye damage/eye irritation

Components:

57-55-6:

Species: rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

GLP: yes

7758-11-4:

Species: rabbit

Result: Irritating to eyes. Exposure time: 24 h Method: In vivo

Respiratory or skin sensitisation

Components:

57-55-6:

Test Type: Maximisation Test (GPMT)

Species: guinea pig Method: In vivo

Result: Did not cause sensitisation on laboratory animals.

7758-11-4:

Test Type: lymph node assay

Species: mouse

Method: OECD Test Guideline 429

Result: Did not cause sensitisation on laboratory animals.

GLP: yes

Remarks: Based on a similar product formulation.

Germ cell mutagenicity

Components:

57-55-6:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Test species: Human lymphocytes

Metabolic activation: with and without metabolic acti-

vation

Method: OECD Test Guideline 473

Result: negative

GLP: yes

: Test Type: Ames test

Metabolic activation: Metabolic activation

Result: negative

MSDS Number: 100000008023 7 / 19 Dowfrost HD



Safety Data Sheet Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

: Test Type: Ames test

Metabolic activation: Without metabolic activation

Result: negative

Genotoxicity in vivo : Test Type: Chromosome aberration assay in vivo

Test species: rat (male) Cell type: Bone marrow Application Route: Oral

Exposure time: Single/5 doses in 24 hr

Dose: 0, 30, 2500, 5000 mg/kg

Result: negative

Test Type: In vivo micronucleus test

Test species: mouse (male) Cell type: Bone marrow

Application Route: Intraperitoneal

Exposure time: Single

Dose: 2500, 5000, 10000, 15000 mg/kg

Result: negative

Test Type: Dominant lethal assay

Test species: rat (male) Application Route: Oral

Exposure time: Single/5 doses in 24 hr

Dose: 0, 30, 2500, 5000 mg/kg

Result: negative

Germ cell mutagenicity-

Assessment

: Tests on bacterial or mammalian cell cultures did not

show mutagenic effects.

7758-11-4:

Genotoxicity in vitro

: Test Type: Ames test

Metabolic activation: with and without metabolic acti-

vation

Method: OECD Test Guideline 471

Result: negative

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

: Test Type: DNA damage and/or repair

Test species: Escherichia coli

Metabolic activation: with and without metabolic acti-

vation

Result: negative

Remarks: Information given is based on data obtained

from similar substances.

: Test Type: Mammalian cell gene mutation assay

Test species: Mouse lymphoma cells

MSDS Number: 100000008023 8 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Metabolic activation: with and without metabolic acti-

vation

Result: negative

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Germ cell mutagenicity-

Assessment

: Did not show mutagenic effects in animal experi-

ments.

Carcinogenicity

Components:

57-55-6:

Species: rat, (male)
Application Route: Oral
Exposure time: 2 yrs

Dose: 200, 400, 900, 1700 mg/kg bw

Group: yes

NOAEL: 1,700 mg/kg bw/day

Result: did not display carcinogenic properties

Species: rat, (female)
Application Route: Oral
Exposure time: 2 yrs

Dose: 300, 500, 1000, 2100 mg/kg bw

Group: yes

NOAEL: 2,100 mg/kg bw/day

Result: did not display carcinogenic properties

Species: rat, (male and female)
Application Route: inhalation (vapour)

Exposure time: up to 18 mths

Dose: 0, >350 mg/m³ NOAEL: 350 mg/m³

Result: did not display carcinogenic properties

Carcinogenicity - As-

: No evidence of carcinogenicity in animal studies.

sessment

7758-11-4:

Remarks: This information is not available.

Carcinogenicity - As-

: Carcinogenicity classification not possible from current

sessment data.

MSDS Number: 100000008023 9 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Reproductive toxicity

Components:

57-55-6:

Effects on fertility : Species: mouse, male and female

Application Route: Oral

Dose: 0, 1820, 4800, 10100 mg/kg bw

General Toxicity - Parent: NOAEL: 10,100 mg/kg body

weight

General Toxicity F1: NOAEL: 10,100 mg/kg body

weight

Fertility: NOAEL: 10,100 mg/kg body weight

Result: No reproductive effects.

Effects on foetal devel-

opment

: Species: mouse

Dose: 0, 52, 520, 10400 mg/kg bw/d Duration of Single Treatment: 10 d

General Toxicity Maternal: NOAEL: 10,400 mg/kg

body weight

Teratogenicity: NOAEL: 10,400 mg/kg body weight Developmental Toxicity: NOAEL: 10,400 mg/kg body

weight

Result: No teratogenic effects.

GLP: yes

Reproductive toxicity -

Assessment

: No evidence of adverse effects on sexual function and fertility, and on development, based on animal exper-

iments.

7758-11-4:

Effects on fertility : Test Type: Screening test

Species: rat, male and female

Application Route: Oral Dose: 0, 1000 mg/kg bw

General Toxicity - Parent: NOAEL: 1,000 mg/kg body

weight

General Toxicity F1: NOAEL: 1,000 mg/kg body

weight

Fertility: NOAEL: 1,000 mg/kg body weight

Method: OECD Test Guideline 422

GLP: yes

Effects on foetal devel-

opment

: Species: mouse

Application Route: Oral

Dose: 0, 3.2, 14.8, 68.9, 320 mg/kg Duration of Single Treatment: 10 d

General Toxicity Maternal: NOAEL: > 320 mg/kg body

weight

Developmental Toxicity: NOAEL: > 320 mg/kg body

weight

Remarks: Information given is based on data obtained



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

from similar substances.

Species: rat

Application Route: Oral

Dose: 0, 2.8, 13.1, 60.7, 282 mg/kg Duration of Single Treatment: 10 d

General Toxicity Maternal: NOAEL: > 282 mg/kg body

weight

Developmental Toxicity: NOAEL: > 320 mg/kg body

weiaht

Remarks: Information given is based on data obtained

from similar substances.

Reproductive toxicity - Assessment

: Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experi-

ments.

STOT - single exposure

Product: No data available

Components:

57-55-6:No data available

77<u>58-11-4</u>:

Exposure routes:	Target Organs:	Assessment:	Remarks:
Inhalation	Respiratory system	May cause respiratory irritation., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.	

STOT - repeated exposure

Product: No data available

Components:

57-55-6:No data available

7758-11-4:No data available

Repeated dose toxicity

Components:

57-55-6:



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Species: rat, male NOAEL: 1,700 mg/kg Application Route: Oral Exposure time: 2 yrs

Number of exposures: daily

Dose: 200, 400, 900, 1700 mg/kg bw

Group: yes

Species: rat, female NOAEL: 2,100 mg/kg Application Route: Oral Exposure time: 2 yrs

Number of exposures: daily

Dose: 300, 500, 1000, 2100 mg/kg bw

Group: yes

Species: rat, male NOAEL: 2200

Application Route: Inhalation

Exposure time: 90 d

Number of exposures: 6 h/d, 5 d/wk Dose: 0, 160, 1000, 2200 mg/m3

Species: rat, female

NOAEL: 1000

Application Route: Inhalation

Exposure time: 90 d

Number of exposures: 6 h/d, 5 d/wk Dose: 0, 160, 1000, 2200 mg/m3

Symptoms: weight loss

7758-11-4:

Species: rat, male and female

NOAEL: 1,000 mg/kg Application Route: Oral Number of exposures: daily Dose: 0, 1000 mg/kg bw/day Method: OECD Test Guideline 422

GLP: yes

Aspiration toxicity

Components:

57-55-6:

No aspiration toxicity classification

7758-11-4:

No aspiration toxicity classification



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

57-55-6:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100

mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and

other aquatic inverte-

brates

: LC50 (Ceriodaphnia dubia): > 100 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): >

100 mg/l

End point: Growth rate Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

Toxicity to bacteria : NOEC (Pseudomonas putida): > 20,000 mg/l

End point: Growth rate Exposure time: 18 h

GLP:

7758-11-4:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100

mg/l

Exposure time: 96 h Test Type: semi-static test

Test substance: Phosphoric acid, potassium salt (2:3),

dihydrate

Method: OECD Test Guideline 203

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Toxicity to daphnia and : EC50 (Daphnia magna (Water flea)): 100 mg/l

MSDS Number: 100000008023 13 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

other aquatic inverte-

brates

Exposure time: 48 h Test Type: static test

Test substance: Phosphoric acid, potassium salt (2:3),

dihydrate

Method: OECD Test Guideline 202

GLP: yes

Remarks: Information given is based on data obtained

from similar substances.

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 100

mg/l

End point: Growth rate Exposure time: 72 h Test Type: static test

Test substance: Phosphoric acid, potassium salt (2:3),

dihydrate

Method: OECD Test Guideline 201

GLP: yes

Toxicity to bacteria : EC 50 (activated sludge): > 1,000 mg/l

End point: Respiratory rate

Exposure time: 3 h Test Type: Static

Method: OECD Test Guideline 209

GLP: yes

Persistence and degradability

Components:

57-55-6:

Biodegradability : Inoculum: activated sludge

Concentration: 100 mg/l Exposure time: 28 d

Remarks: Readily biodegradable

7758-11-4:

Biodegradability : Remarks: No data available

Bioaccumulative potential

Components:

57-55-6:

Partition coefficient: n-

octanol/water

: Remarks: No data available

Mobility in soil

No data available

MSDS Number: 100000008023 14 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection

of Stratospheric Ozone - CAA Section 602 Class I Sub-

stances

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 in-

formation

: No data available

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 NEXEO's Environmental Services Group

at 800-637-7922.

Contaminated packaging : Empty containers should be taken to an approved

waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

IATA (International Air Transport Association): Not regulated as a dangerous good

IMDG-Code: Not regulated as a dangerous good

DOT (Department of Transportation): Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Mild skin irritant, Moderate eye irritant, Moderate

respiratory irritant

MSDS Number: 100000008023 15 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

WHMIS Classification : D2B: Toxic Material Causing Other Toxic Effects

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

: Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject

to the reporting requirements of SARA Title III,

Section 302.

SARA 313 : SARA 313: This material does not contain any chemi-

> cal components with known CAS numbers that exceed the threshold (De Minimis) reporting levels estab-

lished 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 12 (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).

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

57-55-6 Propylene glycol 100 %

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. Clean-Water Act, Section 311, Table 117.3.

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

US State Regulations

Massachusetts Right To Know

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

Pennsylvania Right To Know

57-55-6 Propylene glycol 90 - 100 % 1 - 5 % 7732-18-5 Water 1 - 5 % 7758-11-4 Phosphoric acid, potassium salt (1:2)

New Jersey Right To Know

MSDS Number: 10000008023 **Dowfrost HD** 16 / 19



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

57-55-6 Propylene glycol 90 - 100 % 7732-18-5 Water 1 - 5 % 7758-11-4 Phosphoric acid, potassium salt (1:2) 1 - 5 %

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:

The components of this product are reported in the fo		,
United States TSCA Inventory	:	y (positive listing) (On TSCA Invento- ry)
Canadian Domestic Substances List (DSL)	:	y (positive listing) (All components of this product are on the Canadian DSL.)
Australia Inventory of Chemical Substances (AICS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Japan. ENCS - Existing and New Chemical Substances Inventory	:	n (Negative listing) (Not in compliance with the inventory)
Japan. ISHL - Inventory of Chemical Substances (METI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Korea. Korean Existing Chemicals Inventory (KECI)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
China. Inventory of Existing Chemical Substances in China (IECSC)	:	y (positive listing) (On the inventory, or in compliance with the inventory)
Switzerland. New notified substances and declared preparations	:	y (positive listing) (The formulation



Dowfrost HD

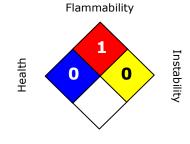
Version 1.0 Revision Date: 02/18/2015

contains sub- listed on the Inventory)
--

SECTION 16. OTHER INFORMATION

Further information

NFPA:



Special hazard.

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 MSDS has been prepared by NEXEO™ Solutions EHS Product Safety Department (1-855-429-2661) MSDS@nexeosolutions.com.

Legecy MSDS: R0229419

Material number:

16058077, 16038378, 689082, 146651, 117241, 116433

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	

MSDS Number: 100000008023 18 / 19 Dowfrost HD



Dowfrost HD

Version 1.0 Revision Date: 02/18/2015

NDSL	Canada, Non-Domestic Sub-	NIOSH	National Institute for Occupational
	stances List		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 Chemical Substances	PICCS	Philipines Inventory of Commercial 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 Compositon, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50		Lethal Conc	entration 50%

MSDS Number: 100000008023 19 / 19 Dowfrost HD