

SAFETY DATA SHEET**SILVERHOOK DE-ICER 500ml****SECTION 1: IDENTIFICATION OF THE SUBSTANCES/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Product name: Silverhook De-Icer

ref: SGDI540

1.2. Relevant identified uses of the substances or mixture and uses advised against

Identified uses: Deicer

1.3. Details of the supplier of the data sheet

Silverhook Ltd
 Unit 14 Bates Road
 Harold Wood, London, England
 RM3 0JH
 Tel.: +44 (0)1708330500
 Fax.: +44 (0)1708330504
 Email: 522@silverhook.co.uk
 Responsible person email: 522@silverhook.co.uk

1.4. Emergency telephone number

+44 (0) 1708 330500 (during office hours)

SECTION 2: HAZARDS IDENTIFICATION**2.1. Classification of the substance or mixture**

Classification (EC 1272/2008)

Physical and chemical hazards
 Human health
 Environment Hazards

Flam. Aerosol 1- H222
 Eye Irrit. 2 – H319
 Not classified

The full text for Hazard statements are displayed in Section 16.

2.2. Label Elements

Label in Accordance with (EC) No. 1272/2008

**Signal word**

Danger

Hazard statements

H222
 H229
 H319

Extremely flammable aerosol.
 Pressurized container: may burst if heated
 Causes serious eye irritation.

Precautionary Statements

P102
 P210
 P211
 P251
 P261
 P271
 P262
 P501

Keep out of reach of children.
 Keep away from heat/sparks/open flames/hot surfaces – No Smoking.
 Do not spray on an open flame or other ignition source.
 Pressurized container: Do not pierce or burn, even after use.
 Avoid breathing vapour/spray.
 Use only outdoors or in a well ventilated area
 Do not get in eyes, on skin, or on clothing
 Dispose of contents/container in accordance with local Regulations.

Supplementary precautionary statements

P273
 P264
 P304+340

Avoid release to the environment.
 Wash contaminated skin thoroughly after handling.
 IF INHALED: Remove victim to fresh air and keep at rest in position comfortable for breathing.
 P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes.
 Remove contact lenses, if present and easy to do. Continue rinsing.

Supplement label information**2.3. Other hazards**

Pressurised container. Protect from sunlight and do not expose to temperatures exceeding 50°C.
Do not pierce or burn even after use. Do not spray on naked flame or any incandescent material –
NO SMOKING.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures**

PETROLEUM GASES LIQUIFIED	40-70%
CAS No.: 68476-85-7	EC No.: 270-704-2
Classification (EC 1272/2008)	
Flam. Gas 1 – H220	
ETHANOL	40-50%
CAS No.: 64-17-5	EC No.: 200-578-6
Classification (EC 1272/2008)	
Flam Liq 2 – H225	
METHANOL	1-3%
CAS No.: 67-56-1	EC No.: 305-316-6
Classification (EC 1272/2008)	
Flam Liq 2 – H225	
Acute Tox 3 – H331	
Acute Tox 3 – H311	
Acute tox 3 – H301	
STOT SE 1 – H370	
MONO ETHYLENE GLYCOL	4-6%
CAS No.: 203-473-3	EC No.: 107-21-1
Classification (EC 1272/2008)	
Acute Tox 4 – H302	

The full text for all hazard statements are displayed in Section 16.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General information**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Inhalation

Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

DO NOT induce vomiting. Rinse mouth with water. Get prompt medical attention.

Skin contact

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media****Extinguishing media**

Fire can be extinguished using: foam; carbon dioxide; dry powder.

5.2. Special hazards arising from the substance or mixture**Unusual fire & Explosion hazards**

Aerosol cans may explode in fire generating vapours which may form explosive air/vapour mixtures.

5.3. Advice for firefighters

Wear self-contained breathing apparatus if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapours. Ensure adequate ventilation. Remove all sources of ignition.

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Let evaporate. Keep out of confined spaces because of explosion risk. If leakage cannot be stopped, evacuate area.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

7.2. Conditions for safe storage, including any incompatibilities

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

	STD	TWA – 8 Hrs		STEL – 15 Min		Notes
PETROLEUM GASES LIQUIFIED	WEL	1000 ppm	1250 mg/m ³	1250 ppm	2180 mg/m ³	UK EH40 WEL
ETHANOL	WEL	1000ppm	1920 mg/m ³			UK EH40 WEL
METHANOL	WEL	200 ppm	266 mg/m ³	250 ppm	333 mg/m ³	UK EH40 WEL

WEL = Workplace exposure limit.

8.2. Exposure controls**Protective equipment****Engineering Measures**

Provide adequate general and local exhaust ventilation.

Respiratory equipment

If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Use respirators and components tested and approved under appropriate government standards such as CEN (EU).

Hand protection

Use protective gloves. These should satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection

Wear splash proof goggles to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Other protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties****Appearance**

Aerosol.

Odour

No data available

Odour Threshold

No data available

pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	40 (°C)
Flash point	No data available
Evaporation point	No data available
Flammability (solid gas)	No data available
Upper/lower flammability Or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidising properties	No data available.

9.2. Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

No data available.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid heat, flames and other sources or ignition.

10.5. Incompatible materials

Materials to avoid

Strong acids, strong oxidising substances and strong alkalis.

10.6. Hazardous decomposition products

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Ethanol

Acute toxicity

LD50 - Oral - Rat -10,470 mg/kg

LC50 -Inhalation - Rat - 4 h - 30,000 mg/l

LD50 - Dermal - Rabbit - 15,800 mg/kg

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation -24 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Moderate eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

Carcinogenicity - Mouse -Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Liver: Tumors. Blood: Lymphomas including Hodgkin's disease.

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

Reproductive toxicity

Reproductive toxicity - Human - female - Oral

Effects on Newborn: Apgar score (human only). Effects on Newborn: Other neonatal measures or effects. Effects on Newborn: Drug dependence.

Specific target organ toxicity -single exposure

No data available

Specific target organ toxicity -repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: KQ6300000

Central nervous system depression, narcosis, Damage to the heart., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Methanol**Acute toxicity**

LDLO Oral-Human-143 mg/kg

Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

LD50 Oral-rat-1,187 -2,769 mg/kg

LC50 Inhalation-rat-4 h-128.2 mg/l

LC50 Inhalation-rat-6 h-87.6 mg/l

LD50 Dermal – rabbit - 17,100 mg/kg

Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation

Serious eye damage/eye irritation

Eyes-rabbit

Result: No eye irritation

Respiratory or skin sensitisation

Maximisation Test-guinea pig

Does not cause skin sensitisation.

(OECD Test Guideline 406)

Germ cell mutagenicity

Ames test

S. typhimurium

Result: negative

In vitro assay fibroblast

Result: negative

Mutation in mammalian somatic cells.

Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) mouse-male and female

Result: negative

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.

Reproductive toxicity

Damage to fetus not classifiable

Fertility classification not possible from current data.

Specific target organ toxicity - single exposure

Causes damage to organs.

Specific target organ toxicity -repeated exposure. The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

No aspiration toxicity classification

Additional Information

RTECS: PC1400000 Methyl alcohol may be fatal or cause blindness if swallowed.

Effects due to ingestion may include:, Headache, Dizziness, Drowsiness, metabolic acidosis, Coma, Seizures. Symptoms may be delayed. Damage of the: Liver, Kidney

Mono ethylene glycol**Inhalation**

May cause irritation to the respiratory system.

Ingestion

Harmful or fatal if swallowed. May cause nausea, vomiting and diarrhoea.

Skin contact

Slightly irritating.

Eye contact

Irritating to eyes

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

The product contains a substance which is harmful to aquatic organisms and which may cause long term adverse effects in the aquatic environment.

12.1. Toxicity**Ethanol****Toxicity to fish**

LC50 - Pimephales promelas (fathead minnow) - 14,200 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

LC50 - Ceriodaphnia dubia (water flea) - 5,012 mg/l - 48 h

NOEC - Daphnia magna (Water flea) - 9.6 mg/l - 9 d

Toxicity to algae

EC50 - Chlorella vulgaris (Fresh water algae) - 275 mg/l -72 h

(OECD Test Guideline 201)

Methanol**Toxicity to fish**

LC50 - Pimephales promelas (fathead minnow) -28200 mg/L [flow-through] – 96 h

LC50 - Pimephales promelas (fathead minnow) >100 mg/L [static] – 96 h

LC50 - Oncorhynchus mykiss (rainbow trout) - 19500 -20700 mg/L [flow-through] – 96 h

LC50 - Oncorhynchus mykiss (rainbow trout) 18 -20 mL/L [static] – 96 h
 LC50 - Lepomis macrochirus (bluegill) -13500 -17600 mg/L [flow - through - 96 h]
 Toxicity to daphnia and other aquatic invertebrates
 EC50 48 hr Daphnia magna (water flea)>10000 mg/l – 48 h
 Toxicity to algae
 EC50 - Selenastrum capricornutum (green algae) - 22000 mg/l – 72 h

Mono ethylene glycol

Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

Toxicity to fish

LC 50 – Onchorynchus mykiss (rainbow trout) – 18000mg/l – 96 h
 Toxicity to daphnia and other aquatic invertebrates
 EC 50 - Daphnia magna (water flea) - 46,300 mg/l - 48 Hrs
 Toxicity to algae
 IC 50 - S.quadricauda (Green algae)- 10,000 mg/l – 72 h

12.2. Persistence and degradability

No data available

12.3. Bio accumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB Assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS**13.1. Waste treatment methods**

Empty containers must not be burned because of explosion hazard. Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION**14.1. UN Number**

UN No (ADR/RID/ADN)	1950
UN No (IMDG)	1950
UN NO (ICAO)	1950

14.2. UN Proper Shipping Name

ADR/IMDG/AND/RID	AEROSOLS
IATA	Aerosols Flammable

14.3. Transport Hazard Class(es)

ADR/RID/ADN Class	2.1
ADR/RID/ADN Class	Class 2: Gases
ADR Label No	2.1 & 6.1
IATA	2.1
IMDG Class	2.1
ICAO Class/Division	2.1
ICAO Subsidiary Risk	6.1
ICAO TEC* No	20GSF
Air Class	2.1
UK Road Class	2.1
Transport Labels	L.Q.

**14.4. Packing Group**

Not Applicable

14.5. Environmental Hazards

Dangerous for the environment	No
Marine pollutant	No
Other information	No supplementary information available

14.6. Special Precautions for user**Overland Transport**

Classification Code (ADR):	5F
Special Provisions (ADR):	190,327,344,625
Limited Quantities (ADR):	1I
Excepted Quantities (ADR):	E0
Packing Instructions (ADR):	P207,LP02
Special Packing provisions (ADR):	PP87, RR6, L2
Mixed Packing provisions (ADR):	MP9
Transport Strategy (ADR):	2
Special provisions for carriage – Packages (ADT)	V14
Special Provisions for carriage – Loading, unloading and handling (ADR):	CV9, CV12
Special provisions for carriage – Operation (ADR): S2	
Tunnel Restriction Code:	D

Transport by Sea

Special Provisions (IMDG):	63,190,277,327,344,959
Limited Quantities (IMDG):	SP277
Excepted Quantities (IMDG):	E0
Packing Instructions (IMDG):	P207,LP02
Special Packing provisions (IMDG):	PP87,L2
EmS-No (Fire):	F-D
EmS-No (Spillage):	S-U
Stowage category (IMDG):	None
Stowage and Handling (IMDG):	SW1,SW22
Segregation (IMDG):	SG69
MFAG-No:	126

Air Transport

PCA Excepted Quantities (IATA):	E0
PCA Limited Quantities (IATA):	Y203
PCA Limited Quantity max net quantity (IATA):	30KgG
PCA Packing instructions (IATA):	203
PCA max net quantity (IATA):	75Kg
CAO packing instructions (IATA):	203
CAO max net quantity (IATA):	150Kg
Special provisions (IATA):	A145,A167,A802
ERG Code (IATA):	10L

Inland Waterway Transport

Classification Code (ADN):	5F
Special Provisions (ADN):	190,327,344,625
Limited Quantities (ADN):	1 L
Excepted Quantities (ADN):	E0
Equipment required (ADN):	PP,EX,A
Ventilation (ADN):	VE01,VE04
Number of blue cones/lights (ADN):	1

Rail Transport

Classification Code (RID):	5F
Special Provisions (RID):	190,327,344,625
Limited Quantities (RID):	1L
Excepted Quantities (RID):	E0
Packing Instructions (RID):	P207,LP02
Special Packing provisions (RID):	PP87,RR6,L2
Mixed Packing provisions (RID):	MP9
Transport Category (RID):	2
Special Provisions for carriage – Packages (RID):	W14
Special Provisions for carriage – Loading, unloading and handling (RID):	CW9, CW12
Colis Express (express parcels) (RID):	CE2
Hazard Identification No (RID):	23

14.7. Transport in bulk according to Annex II of MARPOL and the IBC code

Not applicable

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Labelling according to Regulation (EC) No 1272/2008**

The chemicals (Hazard information and packaging for supply) regulations 2009 (S.I 2009 No. 716). Control of substances hazardous to health. Approved code of practice.

Guidance notes

Workplace exposure limits EH40.

EU Regulations

Contains no REACH substances with Annex XVII restrictions.

Contains no substance on the REACH candidate list.

Contains no REACH Annex XIV substances.

National Regulations

No additional information available.

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for this product.

SECTION 16: OTHER INFORMATION**General information**

This product should be used as directed. For further information consult the product data sheet or contact technical services.

Information sources

This safety data sheet was compiled using current safety information supplied by distributors of raw materials.

Hazard Statements

H220	Extremely flammable gas
H222	Extremely flammable aerosol
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H319	Causes serious eye irritation
H331	Toxic if inhaled
H315	Causes skin irritation
H370	Causes damage to organs

Abbreviations

Flam Gas 1	Flammable Gas Category 1
Flam Liq 2	Flammable Liquid Category 2
STOT SE 3	Specific Target Organ Toxicity – Single Exposure – Category 3
Eye Irrit 2	Eye Irritant Category 2
Acute Tox 3/4	Acute Toxicity Category 3/4

ISSUE:**ISSUE 1****REVISION DATE:****JANUARY 2022****DISCLAIMER**

The Information provided herein, especially recommendations for the usage and the application of this products, is provided in good faith, and no liability on the part of Silverhook Ltd is stated or implied. Due to different materials used, as well as to varying working conditions, production techniques, and the requirements of the end users, all of which are beyond our control, we strongly recommend that thorough and extensive trials are carried out in order to test the suitability of our products with regard to the required processes and applications. This should also include an ageing test which should be applied to all substrates used. It is also the responsibility of the purchaser and end user of this product to ensure that all appropriate actions necessary for the protection of the environment, and for the health and safety of their employees are observed.

This datasheet replaces all former versions