



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS # : 085131

GLACELF SI-OAT

Date of the previous version: 2017-10-31

Revision Date: 2018-04-23

Version 2

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	GLACELF SI-OAT
Number	E6V
Substance/mixture	Mixture

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

Identified uses	Coolant.
------------------------	----------

1.3. Details of the supplier of the safety data sheet

Supplier	<p style="color: red;">A - TOTAL UK LIMITED 183 Eversholt St, Kings Cross London, NW1 1BU UNITED KINGDOM Tel: +44 (0)20 7339 8000 Fax: +44 (0)20 7339 8033</p> <p style="color: red;">B - TOTAL LUBRIFIANTS 562 Avenue du Parc de L'île 92029 Nanterre Cedex FRANCE Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71***</p>
-----------------	--

For further information, please contact:

Contact Point	A - HSE
	B - HSE***
E-mail Address	A - rm.gb-msds@total.co.uk
	B - rm.msds-lubs@total.com***

1.4. Emergency telephone number

Emergency telephone: +44 1235 239670

UK: National Poisons Information Service (NPIS): NHS on 111 or a doctor

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

REGULATION (EC) No 1272/2008 ****For the full text of the H-Statements mentioned in this Section, see Section 2.2. ******Classification**

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008***

Acute oral toxicity - Category 4*** - (H302)***

Specific target organ toxicity (repeated exposure) - Category 2*** - (H373)***

2.2. Label elements

Labelled according to

REGULATION (EC) No 1272/2008***

Contains Monoethyleneglycol

**Signal word**

WARNING***

Hazard Statements ***

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure***

Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P264 - Wash hands thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P314 - Get medical advice/attention if you feel unwell

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P501 - Dispose of contents/ container to an approved waste disposal plant***

2.3. Other hazards**Physical-Chemical Properties**

Contaminated surfaces will be extremely slippery.***

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS3.2. Mixture*****Chemical nature**

Product with ethylene-glycol base.***

Hazardous components

Chemical Name	EC-No	REACH	CAS-No	Weight %	Classification (Reg. 1272/2008)
---------------	-------	-------	--------	----------	---------------------------------

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

		Registration Number			
Monoethyleneglycol***	203-473-3***	01-2119456816-28	107-21-1	90-<100	Acute Tox.4 (H302) STOT RE 2 (H373)

Additional information

This product contains an approved repellent (bitter), for the purpose of avoiding the risk of accidental ingestion.***

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures**General advice**

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.***

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.***

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse.***

Inhalation

Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.***

Ingestion

Clean mouth with water. Take victim immediately to hospital. Induce vomiting, but only if victim is fully conscious. Never give anything by mouth to an unconscious person.***

Protection of first-aiders

First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.***

4.2. Most important symptoms and effects, both acute and delayed**Eye contact**

Not classified based on available data. May cause slight irritation.***

Skin contact

Not classified based on available data.***

Inhalation

Not classified based on available data. Vapours inhaled in strong concentration have a narcotic effect on the central nervous system. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.***

Ingestion

Harmful if swallowed. Ingestion constitutes the main danger because of the toxicity of ethylene glycol. Accidental ingestion may be harmful to the central nervous system. Ingestion is followed first by digestive disorders (nausea, vomiting, abdominal pain), then by loss of muscular coordination, convulsions, headaches, and dizzy spells, preceding serious nervous disorders. This develops into a state of torpor and then coma, at times accompanied by convulsions. Intoxication can lead to a coma with metabolic acidosis that may be fatal.***

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

4.3. Indication of any immediate medical attention and special treatment needed**Notes to physician**

Ingestion, depending on the dose, can cause i.a. abnormal behaviour, unconsciousness, convulsions, respiratory paralysis, pulmonary oedemas, as well as damages to liver and kidneys and can lead, in the worst case, to death. A quick treatment of an ethylene-glycol intoxication, when necessary with haemodialysis, may reduce the toxic effects. Intravenous ethyl alcohol in sodium bicarbonate solution is an approved antitoxin. Rinse mouth.***

Section 5: FIRE-FIGHTING MEASURES5.1. Extinguishing media

Suitable extinguishing media Water spray. ABC powder. Foam.***

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration.***

5.3. Precautions for fire-fighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit.

Other information Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6: ACCIDENTAL RELEASE MEASURES6.1. Personal precautions, protective equipment and emergency procedures

General Information Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.***

6.2. Environmental precautions

General Information Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.***

6.3. Methods and material for containment and cleaning up

Methods for containment Dike to collect large liquid spills. If necessary dike the product with dry earth, sand or similar non-combustible materials.***

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Methods for cleaning up

Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.***

6.4. Reference to other sections

Personal protective equipment See Section 8 for more detail.

Waste treatment See section 13.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.***

Prevention of fire and explosion

Take precautionary measures against static discharges.***

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.***

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep away from food, drink and animal feedingstuffs. Keep in a bunded area. Keep container tightly closed. Preferably keep in the original container. Otherwise, reproduce all the statutory information from the labels onto the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.***

Materials to avoid

Strong oxidising agents.***

Packaging material

Recommended materials:: steel, Aluminium, Polyethylene.
Not Compatible: Zinc.***

7.3. Specific use(s)

Specific use(s)

Please refer to Technical Data Sheet for further information.***

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parametres

Exposure limits

Components with workplace control parametres

Version EUUK

SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Chemical Name	European Union	The United Kingdom	Ireland
Monoethyleneglycol*** 107-21-1	TWA 20 ppm TWA 52 mg/m ³ STEL 40 ppm STEL 104 mg/m ³ S****	STEL 40 ppm vapour STEL 104 mg/m ³ vapour STEL 30 mg/m ³ particulate TWA 10 mg/m ³ particulates TWA 20 ppm vapour TWA 52 mg/m ³ vapour S****	TWA 10 mg/m ³ particulate TWA 20 ppm vapour TWA 52 mg/m ³ vapour STEL 40 ppm particulate STEL 104 mg/m ³ vapour Skin***

Legend

See section 16

Derived No Effect Level (DNEL)

DNEL Worker (Industrial/Professional)***

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Monoethyleneglycol*** 107-21-1			106 mg/kg bw/day (dermal)	35 mg/m ³ /8h (inhalation)

DNEL Consumer***

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
Monoethyleneglycol*** 107-21-1			53 mg/kg bw/day (dermal)	7 mg/m ³ /24h (inhalation)

Predicted No Effect Concentration (PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
Monoethyleneglycol*** 107-21-1	10 mg/l (fw) 1mg/l (mw) 10 mg/l (or)	37 mg/kg dw fw 3.7 mg/kg dw mw	1.53 mg/kg dw		199.5 mg/l	

8.2. Exposure controls

Occupational Exposure Controls

Engineering measures

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.***

Personal protective equipment

General Information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product AS DELIVERED. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.***

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387). Type A/P2. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.***

Eye protection

Safety glasses with side-shields. EN 166.***

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type 4/6.***

Hand protection

Nitrile rubber. Butyl rubber. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.***

Environmental exposure controls**General Information**

The product should not be allowed to enter drains, water courses or the soil.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties****Appearance****Colour****Physical state @20°C****Odour****Odour Threshold**

Clear***

violet***

liquid***

characteristic***

No information available

Property**Values****Remarks****Method**

pH ***

*** 8***

ASTM D1287***

Melting point/range ***

< *** -18*** °C***

ISO 3016 ***

< *** 0*** °F***

ISO 3016 ***

Boiling point/boiling range ***

>*** 160*** °C***

ASTM D1120***

>*** 320*** °F***

ASTM D1120***

Flash point ***

>*** 124*** °C***

ISO 2719***

>*** 255*** °F***

ISO 2719***

Evaporation rate

No information available***

Flammability Limits in Air

Upper ***

15,1*** %***

DIN 51649-1 ***

Lower ***

3,4*** %***

DIN 51649-1 ***

Vapour pressure ***

*** 0.2*** hPa***

@ 20 °C ***

Vapour density

No information available***

Relative density ***

*** 1.122*** -*** 1.125***

@ 20 °C***

DIN 51757 ***

Density

1.122*** - *** 1.125***
g/cm3***

@ 20 °C***

DIN 51757***

Water solubility

soluble***

Solubility in other solvents

No information available***

logPow

No information available***

Autoignition temperature ***

*** 420*** °C***

DIN 51794 ***

*** 788*** °F***

DIN 51794 ***

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Decomposition temperature	***	No information available	
Viscosity, kinematic ***	***	No information available ***	***
***	*** 20*** -*** 30***	@ 20 °C ***	DIN 51562 ***
	mm ² /s***		
Explosive properties	Not explosive***		
Oxidising properties	Not applicable***		
Possibility of hazardous reactions	None under normal processing***		

9.2. Other information

Freezing point No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

General Information None under normal processing.***

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions No dangerous reaction known under conditions of normal use.***

10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.***

10.5. Incompatible materials

Materials to avoid Strong oxidising agents.***

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products None known based on information supplied. Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.***

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects**Acute toxicity Local effects Product Information**

Skin contact . Not classified based on available data.***

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Eye contact	. Not classified based on available data. May cause slight irritation.***
Inhalation	. Not classified based on available data. Vapours inhaled in strong concentration have a narcotic effect on the central nervous system. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.***
Ingestion	. Harmful if swallowed. Ingestion constitutes the main danger because of the toxicity of ethylene glycol. Accidental ingestion may be harmful to the central nervous system. Ingestion is followed first by digestive disorders (nausea, vomiting, abdominal pain), then by loss of muscular coordination, convulsions, headaches, and dizzy spells, preceding serious nervous disorders. This develops into a state of torpor and then coma, at times accompanied by convulsions. Intoxication can lead to a coma with metabolic acidosis that may be fatal.***
ATEmix (oral)	1600*** mg/kg***

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Monoethyleneglycol***	LD50 2000 mg/kg Oral (Rat) LD50 1600 mg/kg (cat)	LD50 > 3500 mg/kg Dermal (Mouse)	LC50(6h) >2.5 mg/l Inhalation (Rat)

Sensitisation

Sensitisation Not classified based on available data.***

Specific effects

Carcinogenicity Not classified based on available data.***
Germ cell mutagenicity Not classified based on available data.***

Reproductive toxicity Not classified based on available data.***

Repeated Dose Toxicity**Target Organ Effects (STOT)**

Specific target organ systemic toxicity (single exposure) Not classified based on available data.***

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure. Kidney.***

Aspiration toxicity Not classified based on available data.***

Other information

Other adverse effects None known.***

Section 12: ECOLOGICAL INFORMATION

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

12.1. Toxicity

Not classified based on available data.***

Acute aquatic toxicity - Product Information***

No information available.***

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates.	Toxicity to fish	Toxicity to microorganisms
Monoethyleneglycol*** 107-21-1	EC50(48h) >10000 mg/l	EC50(48h) >100 mg/l Daphnia magna (OECD 202)	LC50 (95h) 72860 mg/l (Phimephales promelas) LC50(96h) 18500 mg/l (Rainbow trout) EC50(96h) 6500-13000 mg/l (Selenastrum capricornulum)	

Chronic aquatic toxicity - Product Information

No information available.***

Chronic aquatic toxicity - Component Information

No information available.***

Effects on terrestrial organisms

No information available.***

12.2. Persistence and Degradability**General Information**

No information available.

12.3. Bioaccumulative potential**Product Information**

No information available.***

logPow

No information available***

Component Information

Chemical Name	log Pow
Monoethyleneglycol*** - 107-21-1	-1.36

12.4. Mobility in soil**Soil**

Given its physical and chemical characteristics, the product is generally mobile in the ground.***

Air

the product may evaporate.***

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Water soluble.***

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment This product contains no substance considered as PBT and/or vPvB according to REACH regulation annex XIII criteria.***

12.6. Other adverse effects

General Information No information available.***

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products Should not be released into the environment. Do not empty into drains. Dispose of in accordance with the European Directives on waste and hazardous waste.***

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.***

EWC Waste Disposal No According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 16 01 14.***

Other information Refer to section 8 for safety and protective measures for disposal personnel.***

Section 14: TRANSPORT INFORMATION

ADR/RID not regulated

IMDG/IMO not regulated

ICAO/IATA not regulated

ADN not regulated

Section 15: REGULATORY INFORMATION

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

European Union

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

Further information

No information available***

15.2. Chemical Safety Assessment**Chemical Safety Assessment** No information available***15.3. National regulatory informationThe United Kingdom

- Avoid exceeding occupational exposure limits (see section 8).

Ireland

- Avoid exceeding occupational exposure limits (see section 8).

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure***

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

DNEL = Derived No Effect Level

PNEC = Predicted No Effect Concentration

dw = dry weight

fw = fresh water

mw = marine water

or = occasional release

Legend Section 8

Version EUUK



SDS # : 085131

GLACELF SI-OAT

Revision Date: 2018-04-23

Version 2

TWA: Time Weight Average
 STEL: Short Time Exposure Limit

+	Sensitiser	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

Revision Date: 2018-04-23

Revision Note *** Indicates updated section.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of Safety Data Sheet