ENEOS Super Cool BSG

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 10/10/2014 Revision date: 20/02/2015 Supersedes: 10/10/2014 Version: 1.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : ENEOS Super Cool BSG

Product code : V161500180

Product group : Trade product

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

1.2.1. Relevant identified uses

Intended for general public

Main use category : industrial use,professional use,consumer use

Function or use category : Anti-freezing agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

JX NIPPON OIL & ENERGY EUROPE LIMITED
4th Floor, 4 Moorgate
London, EC2R 6DA
UNITED KINGDOM

1.4. Emergency telephone number

Emergency number : 0044 20 7186 0400
(Monday to Friday: 8:00 - 17:00)

Country	Organisation/Company	Address	Emergency number
ICELAND	Iceland Poisons Information Centre Landspitali University Hospital	Fossvogi 108 Reykjavik	+354 525 111 +354 543 2222
IRELAND (REPUBLIC OF)	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964
UNITED KINGDOM	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours)
Ελλάδα	Poisons Information Centre Children's Hospital "Aglaia. Kyriakou"	11527 Athens	+30 10 779 3777
إسرائيل	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096 Haifa	+972 4 854 1900

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302

STOT RE 2 H373

Full text of H-statements: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R22

Full text of R-phrases: see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS07 GHS08

CLP Signal word : Warning

Hazardous ingredients	:	ethanediol, ethylene glycol
Hazard statements (CLP)	:	H302 - Harmful if swallowed H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (Dermal, Inhalation, oral)
Precautionary statements (CLP)	:	P102 - Keep out of reach of children P260 - Do not breathe mist, spray, vapours P264 - Wash hands thoroughly after handling P270 - Do not eat, drink or smoke when using this product P301+P312 - IF SWALLOWED: Call a POISON CENTER if you feel unwell

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanediol, ethylene glycol	(CAS No) 107-21-1 (EC no) 203-473-3 (EC index no) 603-027-00-1 (REACH-no) 01-2119456816-28	>= 50	Xn; R22	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
Glycerol substance with national workplace exposure limit(s) (BE, CZ, ES, FI, FR, GB, GR, IE, IT, PL, PT)	(CAS No) 56-81-5 (EC no) 200-289-5	25 - 35	Not classified	Not classified
Sodium-2-ethylhexanoate	(CAS No) 19766-89-3 (EC no) 243-283-8 (REACH-no) 01-2119979083-31	2,5 - 5	Repr.Cat.3; R63	Repr. 2, H361d

Full text of R- and H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	Seek medical attention if ill effect develops.
First-aid measures after inhalation	:	Take victim to fresh air, in a quiet place, in an half laying position and if necessary take medical advice. Allow the victim to rest.
First-aid measures after skin contact	:	Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Seek medical attention if ill effect or irritation develops.
First-aid measures after eye contact	:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Ensure adequate flushing of eyes by separating eyelids with the fingers. Obtain medical attention if pain, blinking, tears or redness persist.
First-aid measures after ingestion	:	Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician. Drink plenty of water. If vomiting occurs spontaneously, keep head below the hips to prevent aspiration.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	:	At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
Symptoms/injuries after skin contact	:	Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after eye contact	:	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
Symptoms/injuries after ingestion	:	Bad taste. Damage to kidneys. The main component of this product is harmful by ingestion. Swallowing a small quantity of this material will result in serious health hazard.
Symptoms/injuries upon intravenous administration	:	Unknown.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Water fog. Carbon dioxide (CO2), dry chemical powder, foam.

Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustion generates : CO, CO2.

Explosion hazard : Not expected to be a fire/explosion hazard under normal conditions of use.

5.3. Advice for firefighters

Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Firefighting instructions : Use water spray or fog for cooling exposed containers.

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

Other information : Prevent fire-fighting water from entering environment. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Spill area may be slippery. Prevent soil and water pollution. Prevent entry to sewers and public waters.

6.1.1. For non-emergency personnel

Protective equipment : Use protective clothing.

Emergency procedures : Consider evacuation.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : No specific measures are necessary.

6.2. Environmental precautions

Dike for recovery or absorb with appropriate material. Notify authorities if product enters sewers or public waters. Prevent soil and water pollution. Prevent liquid from entering sewers, watercourses, underground or low areas. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.3. Methods and material for containment and cleaning up

For containment : Large quantities: Contain large spillage with sand or earth.

Methods for cleaning up : Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Take up large spills with pump or vacuum and finish with dry chemical absorbent.

Other information : Use suitable disposal containers. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations. On water, recover/skim from surface and pour out in disposal container.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

Precautions for safe handling : Avoid prolonged and repeated contact with skin. May be dangerously slippery if spilled. Where contact with eyes or skin is likely, wear suitable protection. Do not eat, drink or smoke during use. Remove contaminated clothing and shoes.

Hygiene measures : Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Handle in accordance with good industrial hygiene and safety practice. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Where contact with eyes or skin is likely, wear suitable protection. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed and in well ventilated place.

Storage conditions : Store in original container.

Incompatible products : Reacts vigorously with strong oxidizers and acids.

Maximum storage period : 5 year

Storage temperature : ≤ 40 °C.

Prohibitions on mixed storage : Keep away from : oxidizing materials. strong acids.

Storage area : Store at ambient temperature.

Special rules on packaging : Keep container tightly closed and dry.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethanediol, ethylene glycol (107-21-1)		
EU	Local name	Ethylene glycol
EU	IOELV TWA (mg/m³)	52 mg/m³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m³)	104 mg/m³
EU	IOELV STEL (ppm)	40 ppm
EU	Notes	Skin
Austria	Local name	Ethylenglykol
Austria	MAK (mg/m³)	26 mg/m³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (mg/m³)	52 mg/m³
Austria	MAK Short time value (ppm)	20 ppm
Austria	Remark (AT)	H
Belgium	Local name	Ethylèneglycol (en aérosol)
Belgium	Limit value (mg/m³)	52 mg/m³
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m³)	104 mg/m³
Belgium	Short time value (ppm)	40 ppm
Belgium	Remark (BE)	D, M
Bulgaria	Local name	Етиленгликол•
Bulgaria	OEL TWA (mg/m³)	52 mg/m³
Bulgaria	OEL TWA (ppm)	0 ppm
Bulgaria	OEL STEL (mg/m³)	104 mg/m³
Bulgaria	OEL STEL (ppm)	40 ppm
Croatia	Local name	etandiol; (Etilenglikol)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	52 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	20 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	104 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	40 ppm
Croatia	Naznake (HR)	K, EU* Xn
Cyprus	OEL TWA (mg/m³)	52 mg/m³
Cyprus	OEL TWA (ppm)	20 ppm
Cyprus	OEL STEL (mg/m³)	104 mg/m³
Cyprus	OEL STEL (ppm)	40 ppm
Czech Republic	Local name	Ethylenglykol
Czech Republic	Expoziční limity (PEL) (mg/m³)	50 mg/m³
Czech Republic	Expoziční limity (PEL) (ppm)	20 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m³)	100 mg/m³
Czech Republic	Expoziční limity (NPK-P) (ppm)	39 ppm
Czech Republic	Remark (CZ)	D
Denmark	Grænseværdie (langvarig) (mg/m³)	10 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	10 ppm
Estonia	Local name	1,2-etaandiool (etüleenglükool)
Estonia	OEL TWA (mg/m³)	52 mg/m³
Estonia	OEL TWA (ppm)	20 ppm
Estonia	OEL STEL (mg/m³)	104 mg/m³
Estonia	OEL STEL (ppm)	40 ppm
Finland	Local name	1,2-Etaanidioli
Finland	HTP-arvo (8h) (mg/m³)	50 mg/m³

ethanediol, ethylene glycol (107-21-1)		
Finland	HTP-arvo (8h) (ppm)	20 ppm
Finland	HTP-arvo (15 min)	100 mg/m³
Finland	HTP-arvo (15 min) (ppm)	40 ppm
France	Local name	Ethylèneglycol (vapeur)
France	VME (mg/m³)	52 mg/m³
France	VME (ppm)	20 ppm
France	VLE (mg/m³)	104 mg/m³
France	VLE (ppm)	40 ppm
Germany	Local name	Ethandiol
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	26 mg/m³
Germany	TRGS 900 Occupational exposure limit value (ppm)	10 ppm
Germany	Remark (TRGS 900)	DFG,EU,H,Y
Gibraltar	OEL TWA (mg/m³)	52 mg/m³
Gibraltar	OEL TWA (ppm)	20 ppm
Gibraltar	OEL STEL (mg/m³)	104 mg/m³
Gibraltar	OEL STEL (ppm)	40 ppm
Greece	OEL TWA (mg/m³)	125 mg/m³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m³)	125 mg/m³
Greece	OEL STEL (ppm)	50 ppm
Hungary	Local name	ETILÉNGLIKOL
Hungary	AK-érték	52 mg/m³
Hungary	CK-érték	104 mg/m³
Hungary	Megjegyzések (HU)	b, i; I.
Ireland	OEL (8 hours ref) (mg/m³)	52 mg/m³
Ireland	OEL (8 hours ref) (ppm)	20 ppm
Ireland	OEL (15 min ref) (mg/m3)	104 mg/m³
Ireland	OEL (15 min ref) (ppm)	40 ppm
Italy	Local name	Etilen glicol
Italy	OEL TWA (mg/m³)	52 mg/m³
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m³)	104 mg/m³
Italy	OEL STEL (ppm)	40 ppm
Latvia	Local name	Etilēnglikols, (1,2-etāndiols)
Latvia	OEL TWA (mg/m³)	52 mg/m³
Latvia	OEL TWA (ppm)	20 ppm
Latvia	OEL STEL (mg/m³)	104 mg/m³
Latvia	OEL STEL (ppm)	40 ppm
Lithuania	Local name	Etilenglikolis (1,2-etandiolis, glikolis)
Lithuania	IPRV (mg/m³)	25 mg/m³
Lithuania	IPRV (ppm)	10 ppm
Lithuania	TPRV (mg/m³)	50 mg/m³
Lithuania	TPRV (ppm)	20 ppm
Lithuania	Remark (LT)	O
Luxembourg	Local name	Ethylène-glycol
Luxembourg	OEL TWA (mg/m³)	52 mg/m³
Luxembourg	OEL TWA (ppm)	20 ppm
Luxembourg	OEL STEL (mg/m³)	104 mg/m³
Luxembourg	OEL STEL (ppm)	40 ppm
Malta	Local name	Ethyleneglycol
Malta	OEL TWA (mg/m³)	52 mg/m³

ethanediol, ethylene glycol (107-21-1)		
Malta	OEL TWA (ppm)	20 ppm
Malta	OEL STEL (mg/m³)	104 mg/m³
Malta	OEL STEL (ppm)	40 ppm
Netherlands	Grenswaarde TGG 8H (mg/m³)	10 mg/m³
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	104 mg/m³
Poland	Local name	Glikol etylenowy
Poland	NDS (mg/m³)	15 mg/m³
Poland	NDSCh (mg/m³)	50 mg/m³
Portugal	Local name	Etilenoglicol
Portugal	OEL - Ceilings (mg/m³)	100 mg/m³
Romania	Local name	Etilenglicol
Romania	OEL TWA (mg/m³)	52 mg/m³
Romania	OEL TWA (ppm)	20 ppm
Romania	OEL STEL (mg/m³)	104 mg/m³
Romania	OEL STEL (ppm)	40 ppm
Slovakia	NPHV (priemerná) (mg/m³)	52 mg/m³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	104 mg/m³
Slovakia	NPHV (Hraničná) (ppm)	40 ppm
Slovenia	Local name	etandiol (glikol)
Slovenia	OEL TWA (mg/m³)	52 mg/m³
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m³)	104 mg/m³
Slovenia	OEL STEL (ppm)	40 ppm
Spain	Local name	Etilenglicol
Spain	VLA-ED (mg/m³)	52 mg/m³ Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para elcontenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización delcontrol biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 deeste documento.), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran almenos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembrosdisponen de un tiempo fijado en dichas directivas para su trasposición a los valores límites de cada país miembro. Una vez adoptados,estos valores tienen la misma validez que el resto de los valores adoptados por el país.)
Spain	VLA-ED (ppm)	20 ppm Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para elcontenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización delcontrol biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 deeste documento.), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran almenos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembrosdisponen de un tiempo fijado en dichas directivas para su trasposición a los valores límites de cada país miembro. Una vez adoptados,estos valores tienen la misma validez que el resto de los valores adoptados por el país.)

ethanediol, ethylene glycol (107-21-1)		
Spain	VLA-EC (mg/m³)	104 mg/m³ Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para elcontenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización delcontrol biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 deeste documento.), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran almenos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembrosdisponen de un tiempo fijado en dichas directivas para su trasposición a los valores límites de cada país miembro. Una vez adoptados,estos valores tienen la misma validez que el resto de los valores adoptados por el país.)
Spain	VLA-EC (ppm)	40 ppm Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para elcontenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización delcontrol biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 deeste documento.), VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran almenos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembrosdisponen de un tiempo fijado en dichas directivas para su trasposición a los valores límites de cada país miembro. Una vez adoptados,estos valores tienen la misma validez que el resto de los valores adoptados por el país.)
Sweden	Local name	Ethylene glycol
Sweden	nivågränsvärde (NVG) (mg/m³)	25 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	50 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	20 ppm
United Kingdom	WEL TWA (mg/m³)	10 mg/m³
United Kingdom	WEL TWA (ppm)	20 ppm
United Kingdom	WEL STEL (mg/m³)	30 mg/m³ (calculated)
United Kingdom	WEL STEL (ppm)	40 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m³)	52 mg/m³
Norway	Gjennomsnittsverdier (AN) (ppm)	20 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m3)	104 mg/m³
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	40 ppm
Norway	Gjennomsnittsverdier (Takverdi) (ppm)	25
Switzerland	Local name	Ethylèneglycol
Switzerland	VME (mg/m³)	26 mg/m³
Switzerland	VME (ppm)	10 ppm
Switzerland	VLE (mg/m³)	52 mg/m³
Switzerland	VLE (ppm)	20 ppm
Switzerland	Remark (CH)	4x15
USA - ACGIH	Local name	Ethylene glycol
USA - ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
USA - ACGIH	ACGIH Ceiling (mg/m³)	100 mg/m³
USA - ACGIH	Remark (ACGIH)	URT & eye irr
Glycerol (56-81-5)		
Belgium	Local name	Glycérine (brouillard)
Belgium	Limit value (mg/m³)	10 mg/m³
Croatia	Local name	Glicerol

Glycerol (56-81-5)		
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	10 mg/m³
Czech Republic	Local name	Glycerol, mlha
Czech Republic	Expoziční limity (PEL) (mg/m³)	10 mg/m³
Czech Republic	Expoziční limity (PEL) (ppm)	2,4 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m³)	15 mg/m³
Czech Republic	Expoziční limity (NPK-P) (ppm)	3,7 ppm
Estonia	Local name	Glütseriin (glütserool,1,2,3-propaantriool)
Estonia	OEL TWA (mg/m³)	10 mg/m³
Finland	Local name	Glyseroli
Finland	HTP-arvo (8h) (mg/m³)	20 mg/m³
France	Local name	Glycérine (aérosols de)
France	VME (mg/m³)	10 mg/m³
Greece	OEL TWA (mg/m³)	10 mg/m³
Ireland	Local name	Glycerol, mist
Ireland	OEL (8 hours ref) (mg/m³)	10 mg/m³
Poland	Local name	Glicerol aerozole
Poland	NDS (mg/m³)	10 mg/m³
Portugal	Local name	Glicerina, névoas
Portugal	OEL TWA (mg/m³)	10 mg/m³
Spain	Local name	Glicerina, nieblas
Spain	VLA-ED (mg/m³)	10 mg/m³
United Kingdom	Local name	Glycerol, mist
United Kingdom	WEL TWA (mg/m³)	10 mg/m³
Switzerland	Local name	Glycérine
Switzerland	VME (mg/m³)	50 mg/m³
Switzerland	VLE (mg/m³)	100 mg/m³
Switzerland	Remark (CH)	4x15
Australia	Local name	Glycerin mist
Australia	TWA (mg/m³)	10 mg/m³
Australia	Remark (AU)	(a)
USA - ACGIH	Local name	Glycerin mist
USA - ACGIH	Remark (ACGIH)	URT irr

8.2. Exposure controls

Appropriate engineering controls : Large quantities: Contain large spillage with sand or earth.

Personal protective equipment : Gloves. In case of splash hazard: safety glasses. Eye protection should only be necessary where liquid could be splashed or sprayed.

Materials for protective clothing	:	Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves
Hand protection	:	In case of repeated or prolonged contact wear gloves. The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream). The protection glove should be tested for its specific suitability (e.g. mechanical strength, product compatibility, anti-static properties).
Eye protection	:	Eye protection should only be necessary where liquid could be splashed or sprayed
Skin and body protection	:	No special clothing/skin protection equipment is recommended under normal conditions of use. Avoid repeated or prolonged skin contact. If repeated skin contact or contamination of clothing is likely, protective clothing should be worn. Equipment should conform to EN 166.
Respiratory protection	:	Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure. Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment. Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn. Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used for mist or fume. Use filter type P or comparable standard. A combination filter for particles and organic gases and vapours (boiling point >65°C) may be required if vapour or abnormal odour is also present due to high product temperature. Use filter type AP or comparable standard.

Environmental exposure controls	:	See Heading 12. See Heading 6.
Consumer exposure controls	:	Neoprene or nitrile rubber gloves. Butylrubber protective gloves.
Other information	:	Do not put the product-soaked rags into the pockets of working clothes. Do not use cloths stained with the product to dry hands. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke during use. Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Appearance	:	liquid.
Colour	:	no data available
Odour	:	odourless.
Odour threshold	:	no data available
pH	:	no data available
pH solution	:	7 - 10
Relative evaporation rate (butylacetate=1)	:	< 0,1
Melting point	:	no data available
Freezing point	:	no data available
Boiling point	:	> 100 °C.
Flash point	:	> 111 °C.
Auto-ignition temperature	:	> 390 °C.
Decomposition temperature	:	no data available
Flammability (solid, gas)	:	no data available
Vapour Pressure 20°C	:	< 2 hPa
Relative vapour density at 20 °C	:	> 1 (air=1)
Relative density	:	no data available
Solubility	:	Miscible with water.
Log Pow	:	< -0,1
Viscosity, kinematic	:	no data available
Viscosity, dynamic	:	no data available
Explosive properties	:	no data available
Oxidising properties	:	no data available
Explosive limits	:	no data available

9.2. Other information

VOC content	:	0 %
Other properties	:	Gas/vapour heavier than air at 20'C.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

Moisture. Overheating.

10.5. Incompatible materials

Strong oxidizing agents. strong acids.

10.6. Hazardous decomposition products

CO, CO2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. (Based on available data, the classification criteria are not met)

ethanediol, ethylene glycol (107-21-1)	
LD50 oral rat	4000 mg/kg
LD50 dermal rat	> 3500 ml/kg
LD50 dermal	> 3500 mg/kg
LC50 inhalation rat (mg/l)	> 2,5 mg/l (6h)
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 2,5 mg/l/4h (6h)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : May cause damage to organs (kidneys) through prolonged or repeated exposure (Dermal, Inhalation, oral).

Aspiration hazard : Not classified

Other information : Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products. Likely route of exposure: ingestion, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

ethanediol, ethylene glycol (107-21-1)	
LC50 fish 1	41000 mg/l (96h; Oncorhynchus mykiss)
EC50 Daphnia 1	46300 mg/l (48h; Daphnia magna)
EC50 other aquatic organisms 1	6500 (6500 - 13000) mg/l (96h; Pseudokirchneriella Subcapitata)
LC50 fish 2	14 - 18 ml/l (96h; Oncorhynchus mykiss [static])
Threshold limit algae 1	10000 mg/l (168 h; Scenedesmus quadricauda)
Threshold limit algae 2	2000 mg/l (192 h; Microcystis aeruginosa)

12.2. Persistence and degradability

ethanediol, ethylene glycol (107-21-1)	
Persistence and degradability	Readily biodegradable in water. easily degradable in the soil.
Biochemical oxygen demand (BOD)	0,47 g O_2/g substance
Chemical oxygen demand (COD)	1,24 g O_2/g substance
ThOD	1,29 g O_2/g substance
BOD (% of ThOD)	0,36 % ThOD

12.3. Bioaccumulative potential

ENEOS Super Cool BSG	
Log Pow	< -0,1

ethanediol, ethylene glycol (107-21-1)	
Log Pow	-1,36
Bioaccumulative potential	No bioaccumulation.

12.4. Mobility in soil

ethanediol, ethylene glycol (107-21-1)	
Surface tension	0,048 N/m (20 °C)

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not discharge into drains or the environment.

Additional information : Hazardous waste.

Ecology - waste materials : Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly. When not empty dispose of this container at hazardous or special waste collection point.

European List of Waste (LoW) code : 16 01 14* - antifreeze fluids containing dangerous substances
15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Proper Shipping Name (ADN) : Not applicable

Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (UN) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA)	:	Not applicable
Packing group (ADN)	:	Not applicable
Packing group (RID)	:	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

no data available

- Transport by sea

no data available

- Air transport

no data available

- Inland waterway transport

Not subject to ADN	:	No

- Rail transport

Carriage prohibited (RID)	:	No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content	:	0 %

15.1.2. National regulations

Germany

VwVwS Annex reference	:	Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4.)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	None of the components are listed
SZW-lijst van mutagene stoffen	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	None of the components are listed

Denmark

Classification remarks	:	Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	:	Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H302	Harmful if swallowed
H361d	Suspected of damaging the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
R22	Harmful if swallowed
R63	Possible risk of harm to the unborn child
Xn	Harmful

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product