SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING *

1.1. Product identifier

Product name : INDUSTRIAL SUPREME - ALL WEATHER PROTECTION LOW CONDUCTIVITY ANTIFREEZE/COOLANT
Product code : 043810

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

Application : SU22 Professional use. For industrial or institutional use. PC4 Anti-freeze and de-icing products. Coolant.

1.3. Details of the supplier of the safety data sheet

Supplier : Star Brite Europe Inc.
86 bis route de Brignais
69630 Chaponost, France
Telephone : +33-478-56-77-80
Fax : +33-472-39-97-96
E-mail : jp.kitzinger@starbrite-europe.com
Website : www.starbrite.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:
FR - Telephone : +33-478-56-77-80 (During office hours only)

EMERGENCY TELEPHONE NUMBER (for DOCTORS only):
National Poisons Information Service +44-844 892 0111 (24/7)

SECTION 2 HAZARDS IDENTIFICATION *

2.1. Classification of the substance or mixture

CLP classification (1272/2008/EC) : Acute toxicity, category 4. Skin sensitization, category 1. Specific target organ toxicity — repeated exposure, category 2.

Human health hazards : Harmful if swallowed. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.
Physical/chemical hazards : Not classified as dangerous according to statutory EC-Directives.
Environmental hazards : Not classified as dangerous according to statutory EC-Directives.

2.2. Label elements

Label elements (1272/2008/EC):
Hazard pictograms :

Signal word : Warning

H- and P-phrases :

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H373 kidneys	May cause damage to kidneys through prolonged or repeated exposure.
P260 vapour	Do not breathe vapours.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

P272	Contaminated work clothing should not be allowed out of the workplace.
P280 gloves	Wear protective gloves.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water/soap.
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container to an official chemical waste depot.

Additional labelling (for all packaging sizes)
: Contains: Ethane-1,2-diol ; 2,2'-Oxybisethanol ; 1,2-Benzisothiazol-3(2H)-one .

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances in concentrations higher than 0,1%.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS *

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Remark	REACH nr.
Ethane-1,2-diol	50 - 75	107-21-1	203-473-3		
2,2'-Oxybisethanol	1 - < 5	111-46-6	203-872-2		
1,2-Benzisothiazol-3(2H)-one	< 0,05	2634-33-5	220-120-9		

Substance name	Hazard Class	H-phrases	Pictograms	
Ethane-1,2-diol	Acute Tox. 4; STOT RE 2	H302; H373	GHS07; GHS08	
2,2'-Oxybisethanol	Acute Tox. 4; STOT RE 2	H302; H373	GHS07; GHS08	
1,2-Benzisothiazol-3(2H)-one	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; Aquatic Acute 1	H302; H315; H318; H317; H400	GHS05; GHS07; GHS09	H317 : C ≥ 0.05 %

Occupational exposure limit(s), if relevant, are listed in section 8.

Reference is made to chapter 16 for full text of each relevant H phrase.

SECTION 4 FIRST-AID MEASURES *

4.1. Description of first aid measures

First aid measures

Inhalation : Move victim into fresh air. Consult a doctor if victim feels unwell.

Skin contact : Take off contaminated clothing. Wash off skin with plenty of water and soap before product dries up. Consult a doctor if irritation occurs.

Eye contact : Wash out with (lukewarm) water. Remove contact lenses. Consult a doctor if irritation persists.

Ingestion : Do not induce vomiting. Do rinse the mouth. Give one glass of water. Never give anything by mouth to an unconscious person. Consult a doctor immediately if victim feels unwell.

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

Effects and symptoms

Inhalation : May cause headache, dizziness and a feeling of sickness.

Skin contact	:	May cause redness and irritation, sensitisation. May produce an allergic reaction. May cause dry skin.
Eye contact	:	May cause stinging of eyes and redness.
Ingestion	:	May cause a feeling of sickness, vomiting and diarrhoea. May cause a feeling of sickness, malaise, shortness of breath and lack of breathe.

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

Note to physicians	:	
General	:	Risk of metabolic acidosis.

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Suitable	:	Carbondioxide (CO_2). Alcohol resistant foam. Dry chemical. Water fog.
Not suitable	:	None known.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards	:	None known.
Hazardous thermal decomposition products	:	Carbon monoxide may be evolved if incomplete combustion occurs.

5.3. Advice for firefighters

Special protective equipment for fire-fighters	:	Use adequate respiratory equipment in case of insufficient ventilation.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Danger of slipping. Clean up spills immediately. Wear shoes with non-slip soles. Avoid contact with spilled or released material. Vapours are heavier than air. Build up (of gasses) in low areas involves risk of suffocation.

6.2. Environmental precautions

Environmental precautions	:	Avoid release of product into sewers, surface water and/or ground water. In case of large spills: contain with dike.
Other information	:	Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Collect spilled material in containers. Absorb residues in sand or other inert material. Dispose at an authorised waste collection point. Wash away remainder with plenty of water and soap.

6.4. Reference to other sections

Reference to other sections	:	See also section 8.

SECTION 7 HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling	:	Handle in accordance with good occupational hygiene and safety practices in well-ventilated areas. Do not breathe vapour. Avoid contact with skin and eyes. Avoid splashing. Wear protective clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep in a cool, dry and well-ventilated place (< 35 °C). Keep away from oxidizing agents. Keep away from food, drink and animal feedingstuffs.

Recommended packaging : Keep only in the original container.

Non recommended packaging : Steel (except stainless steel).

7.3. Specific end use(s)

Use : Use only as directed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION *

8.1. Control parameters

Occupational exposure limits : Occupational exposure limits have not been established for this product. Derived no-effect levels (DNEL) have not been established for this product. Predicted no-effect concentrations (PNEC) have not been established for this product.

Workplace exposure limits (mg/m³):

Chemical name	Country	TWA 8 hour (mg/m3)	STEL 15 min (mg/m3)	Comments	Source
Ethane-1,2-diol	GB	52	104	Skin	
Ethane-1,2-diol	EC	52	104	Skin	
2,2'-Oxybisethanol	GB	101	-	-	
2,2'-Oxybisethanol		10	-		MAC: BG, PL

Derived no-effect level (DNEL) for workers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Ethane-1,2-diol	Dermal				106 mg/kg bw/day
	Inhalation			35 mg/m3	
2,2'-Oxybisethanol	Dermal				106 mg/kg bw/day
	Inhalation			60 mg/m3	

Derived no-effect level (DNEL) for consumers:

Chemical name	Route of exposure	DNEL, short-term		DNEL, long-term	
		Local effect	Systemic effect	Local effect	Systemic effect
Ethane-1,2-diol	Dermal				53 mg/kg bw/day
	Inhalation			7 mg/m3	
2,2'-Oxybisethanol	Dermal				53 mg/kg bw/day
	Inhalation			12 mg/m3	

Predicted no-effect concentration (PNEC):

Chemical name	Route of exposure	Fresh water	Marine water	
Ethane-1,2-diol	Water	10 mg/l	1 mg/l	
	Sediment	20,9 mg/kg		
	Intermittent water			10 mg/l
	STP			199,5 mg/l
	Soil			1,53 mg/kg
2,2'-Oxybisethanol	Water	10 mg/l	1 mg/l	
	Sediment	20,9 mg/kg		
	Intermittent water			10 mg/l
	STP			199,5 mg/l
	Soil			1,53 mg/kg

8.2. Exposure controls

Engineering measures : Use only in well-ventilated areas. Comply with standard precautionary measures for working with chemicals.

Hygienic measures : When using do not eat, drink or smoke.

Personal protective equipment:
The efficiency of personal protective equipment depends among other things on temperature and degree of ventilation. Always get professional advice for the particular local situation.

:

Body protection : Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367 resp. 345. Suitable material: nitril. Indication of permeation breakthrough time: 6 hours.

Respiratory protection : Take care of sufficient ventilation. Wear suitable respiratory protection in case of large scale exposure. Suitable: gas filter type A (brown), class I or higher on e.g. a facemask in accordance with EN 140.

Hand protection : Wear appropriate safety gloves in accordance with EN 374. Suitable material: nitril. ± 0,5 mm. Indication of permeation breakthrough time: 6 hours.

Eye protection : Wear appropriate safety glasses when there is danger of possible eye contact.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES *

9.1. Information on basic physical and chemical properties

Appearance	: Liquid.	
Colour	: Colourless.	
Odour	: Characteristic.	
Odour threshold	: Not known.	
pH	: 8	
Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not known.	
Flash point	: > 100 °C	Closed Cup (ISO 2719, EN 11, DIN 51758, ASTM D 93)
Flammability (solid, gas)	: Not applicable.	Liquid. See flashpoint.
Auto ignition temperature	: > 180 °C	
Boiling point/boiling range	: > 100 °C	
Melting point/melting range	: -40 °C	
Explosive properties	: None known.	Does not contain explosives.
Explosion limits (% in air)	: Not known.	Lower explosion limit in air (%): 3,2 (Ethane-1,2-diol)
	:	Upper explosion limit in air (%): 15,3
Oxidising properties	: Not applicable.	Does not contain oxidizing substances.
Decomposition temperature	: Not applicable.	
Viscosity (20°C)	: Not known.	
Viscosity (40°C)	: Not relevant.	The product contains < 10% substances having an aspiration hazard.
Vapour pressure (20°C)	: Not known.	
Vapour density (20°C)	: > 1	(air = 1)
Relative density (20°C)	: 1,08 g/ml	
Evaporation rate	: < 1	(n-butyl acetate = 1)

SECTION 10 STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity : See sub-sections below.

10.2. Chemical stability

Stability : Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reactivity : No other hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid : See section 7.

10.5. Incompatible materials

Materials to avoid : Keep away from oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products : Not known.

SECTION 11 TOXICOLOGICAL INFORMATION *

11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: > 2,615 mg/l. Ingredients of unknown toxicity: < 1 %. ATE: > 5 mg/l. Low toxicity. Not classified - based on available data, the classification criteria are not met. May cause headache, dizziness and a feeling of sickness.
- Corrosion/irritation : Not classified - based on available data, the classification criteria are not met.
- Sensitisation : Does not contain substances classified as respiratory sensitiser. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Skin contact

- Acute toxicity : Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: > 2000 mg/kg.bw. Low toxicity. Not classified - based on available data, the classification criteria are not met.
- Corrosion/irritation : Not classified - based on available data, the classification criteria are not met.
- Sensitisation : May cause sensitisation by skin contact. May produce an allergic reaction.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Eye contact

- Corrosion/irritation : Slight irritation possible. Not classified - based on available data, the classification criteria are not met.

Ingestion

- Acute toxicity : May cause signs of intoxication and reduced consiousness after exposure to high concentrations. May cause a feeling of sickness, malaise, shortness of breath and lack of breathe. Calculated LD50: > 5000 mg/kg.bw. Ingredients of unknown toxicity: < 1 %. ATE: 500 mg/kg.bw.
- Aspiration : Not classified - based on available data, the classification criteria are not met. Does not contain substances with an aspiration hazard.
- Chronic toxicity : Possibility of organ or organ system damage due to prolonged exposure. Target organ(s): Kidneys. Effect: May cause nephrolithiasis.
- Corrosion/irritation : May cause a feeling of sickness, vomiting and diarrhoea.
- Carcinogenicity : Not classified - based on available data, the classification criteria are not met.
- Mutagenicity : Does not contain mutagenic substances. Not classified - based on available data, the classification criteria are not met.

Reprotoxicity : Development: Not expected to be reprotoxic. Development: Not classified - Based on available data, the classification criteria are not met. Fertility: not expected to be reprotoxic. Fertility: Not classified - based on available data, the classification criteria are not met.

Toxicological information:

Chemical name	Property		Method	Test animal
Ethane-1,2-diol	NOEL (carcinogenicity, oral)	1000 mg/kg bw/d		Rat
	NOAEL (development, oral)	250 mg/kg bw/d		Rat
	NOAEL (oral)	150 mg/kg bw/d	OECD 452	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3		
	LC50 (inhalation)	> 2500 mg/m3	-----	Rat
	LD50 (oral) - estimate	500 mg/kg bw		
	Eye irritation	Non-irritant		Rabbit
	LD50 (oral)	7712 mg/kg bw	-----	Rat
	NOEL (inhalation)	71 mg/m3		
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	Skin irritation	Non-irritant		Rabbit
	Genotoxicity - in vitro	Not genotoxic		
	Mutagenicity	Not mutagenic		
	LD50 (dermal)	10600 mg/kg bw		
2,2'-Oxybisethanol	LC50 (inhalation) - estimate	> 5000 mg/m3		Rat
	Mutagenicity	Negative	OECD 471	Salmonella typhimurium
	Genotoxicity - in vivo	> 2000 mg/kg bw/d	OECD 474	Mouse
	LD50 (oral) - estimate	1000 mg/kg bw	-----	Human
	LC50 (inhalation)	130 mg/m3	-----	Mouse
	LD50 (oral)	19600 mg/kg bw	-----	Rat
	NOAEL (oral)	50 mg/kg bw/d		Rat
	Skin irritation	Non-irritant		
	Eye irritation	Non-irritant		
	Genotoxicity - in vitro	Not genotoxic		
	NOAEL (fertility, oral)	612 mg/kg bw/d		Mouse
	NOAEL (development, oral)	1250 mg/kg bw/d		Mouse
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	NOAEL (dermal) - estimate	3549 mg/kg bw/d	-----	Mouse
	Genotoxicity - estimate	Not genotoxic		Mouse
	NOEL (carcinogenicity, oral)	1160 mg/kg bw/d		Rat
	LD50 (dermal) - estimate	> 5000 mg/kg bw	-----	Rabbit
1,2-Benzisothiazol-3(2H)-one	LD50 (dermal)	4115 mg/kg bw		Rat
	NOAEL (fertility, oral)	24 mg/kg bw/d		Rat
	NOAEL (development, oral)	Not teratogenic		
	Genotoxicity - in vivo	250 mg/kg bw/d	OECD 474	Mouse
	Genotoxicity - in vitro	Genotoxic	OECD 473	
	NOAEL (oral)	30 mg/kg bw/d	OECD 408	Rat
	Skin sensitisation	Sensitizing.	OECD 406	Guinea pig
	Eye irritation	Severely irritant		Rabbit
	Skin irritation	Irritant		Rabbit
	LC50 (inhalation)	100 mg/m3		Rat
	LD50 (oral)	1020 mg/kg bw		Rat

Other information : Ethane-1,2-diol There is a marked difference in acute oral toxicity between rodents and man, man being more susceptible than rodents. The estimated fatal dose for man is 100 millilitres (1/2 cup).

SECTION 12 ECOLOGICAL INFORMATION *

12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Calculated LC50 (fish): 1277 mg/l. Calculated EC50 (waterflea): 170 mg/l. Contains 0 % of components with unknown hazards to the aquatic environment. Not classified - based on available data, the classification criteria are not met.

12.2. Persistence and degradability

Persistence – degradability : No specific information known.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : If product enters soil, it will be highly mobile and may contaminate groundwater.

12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances in concentrations higher than 0,1%.

12.6. Other adverse effects

Other information : Not applicable.

SECTION 13 DISPOSAL CONSIDERATIONS *

13.1. Waste treatment methods

Product residues : Do not dispose empty pack with waste produced by households. Containers may be recycled. Treat product residues and non-empty pack as hazardous waste.

Additional warning : None.

Waste water discharge : Do not dispose into the environment, in drains or in water courses.

European waste catalogue : Dispose hazardous waste in accordance with Directive 91/689/EEC under acknowledgement of a waste code according to Commission Decision 2000/532/EC to an official chemical waste depot.

Local legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION 14 TRANSPORT INFORMATION

14.1. UN number

UN nr. : None.

14.2. UN proper shipping name

Transport name : Not regulated.

14.3/14.4/14.5. Transport hazard class(es)/Packing group/Environmental hazards

ADR/RID/ADN (road/railway/inland waterways)

Class : This product is not classified according to ADR/RID/ADN.

IMDG (sea)
Class : This product is not classified according to IMDG.
Marine pollutant : No

IATA (air)
Class : This product is not classified according to IATA.

14.6. Special precautions for user

Other information : Country specific variations may apply.

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

Marpol : Not intended to be carried in bulk according to International Maritime Organisation (IMO) instruments. Packaged liquids are not considered bulk.

SECTION 15 REGULATORY INFORMATION *

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

Community regulations : Regulation (EU) No 2015/830 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION *

16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EU) No 2015/830 dated 28 May 2015 and accurate to the best of our knowledge and experience at the date of issue specified. It is the user's obligation to use this product safely and to comply with all applicable laws and regulations concerning the use of the product. This safety data sheet complements the technical information sheets but does not replace them and offers no warranty with regard to product properties.

Users are also forewarned for any hazards involved when the product is used for other purposes than those for which it is designed.

Changed or new information with regard to the previous release is indicated with an asterisk (*).

List of abbreviations and acronyms that could be (but not necessarily are) used in this safety data sheet:

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE : Acute Toxicity Estimate
CLP : Classification, Labeling & Packaging
CMR : Carcinogenic, Mutagenic or toxic for Reproduction
EEC : European Economic Community
GHS : Globally Harmonized System of Classification and Labelling of Chemicals
IATA : International Air Transport Association
IBC code : International Bulk Chemical Code
IMDG : International Maritime Dangerous Goods Code
LD50/LC50 : Lethal Dose/Concentration for 50% of a population
MAC : Maximum Allowable Concentration
MARPOL : International Convention for the Prevention of Pollution From Ships
NO(A)EL : No Observed (Adverse) Effect Level
OECD : Organisation for Economic Co-operation and Development
PBT : Persistent, Bioaccumulative and Toxic
PC : Chemical product category
PT : Product type

REACH	:	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	:	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	:	Sewage Treatment Plant
SU	:	Sector of Use
TWA/STEL	:	Time-Weighted Average/Short Term Exposure Limit
UN	:	United Nations
VOC	:	Volatile Organic Compounds
vPvB	:	Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008:

Acute Tox. 4	:	Calculation method.
Skin Sens. 1	:	Calculation method.
STOT RE 2	:	Calculation method.

Full text of hazard classes mentioned in section 3:

Acute Tox. 4	:	Acute toxicity, category 4.
Skin Irrit. 2	:	Skin irritation, category 2.
Eye Dam. 1	:	Serious eye damage, category 1.
Skin Sens. 1	:	Skin sensitization, category 1.
STOT RE 2	:	Specific target organ toxicity — repeated exposure, category 2.
Aquatic Acute 1	:	Hazardous to the aquatic environment — Acute category 1.

Full text of H-phrases mentioned in section 3:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Number format : "," used as decimal separator.

End of safety data sheet.