

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1. Product identifier

Product name : STAR BRITE EXTENDED LIFE COOLANT
 Product code : 308XX

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

Application : Consumer product. Anti-freeze and de-icing products. Coolant.

1.3. Details of the supplier of the safety data sheet

Supplier : Star Brite
 4041 SW 47th Avenue
 33314 Fort Lauderdale, Florida, United States of America
 Telephone : 001 800 3278583
 Website : <http://www.starbrite.com>

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:
 US - Telephone : 001 703 5273887 (During office hours only)
 EMERGENCY TELEPHONE NUMBER (for DOCTORS only):
 CHEMTREC 001 703 5273887 (24/7)

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

HPR classification : Acute toxicity, category 4. Specific target organ toxicity — repeated exposure, category 2.
 Human health hazards : Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Label elements (HPR)
 Hazard pictograms :



Signal word : Warning

H- and P-phrases :

H302	Harmful if swallowed.
H373 kidneys	May cause damage to kidneys through prolonged or repeated exposure.
P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P260 vapour	Do not breathe 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/doctor if you feel unwell.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P501	Dispose of contents/container to an official chemical waste depot.

Labelling of packagings where the contents do not exceed 100 ml:

Hazard pictograms :  

Signal word : Warning

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w%)	CAS nr.	Additional CAS nr.	
Ethanediol	30 - 60	107-21-1	----	
2,2' -Oxybisethanol	1 - 5	111-46-6	----	
sodium nitrite	0,1 - 1	7632-00-0	----	

Occupational exposure limit(s), if relevant, are listed in section 8. The actual concentration has been withheld as a trade secret.

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.
- 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 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 (CO2). 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. Do not use saw-dust. 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.

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.

Workplace exposure limits (mg/m³):

Chemical name	Province	TWA 8 hour (mg/m ³)	STEL 15 min (mg/m ³)	Comments	Source
Ethanediol	MB	-	-	OEL Ceiling: 100 mg/m ³	
Ethanediol	NB	-	-	OEL Ceiling: 100 mg/m ³	
Ethanediol	NL	-	-	OEL Ceiling: 100 mg/m ³	
Ethanediol	NS	-	-	OEL Ceiling: 100 mg/m ³	
Ethanediol	NU	10	20	OEL Ceiling: 100 mg/m ³	
Ethanediol	PE	-	-	OEL Ceiling: 100 mg/m ³	
Ethanediol	YT	250	-	OEL Ceiling: 325 mg/m ³	
Ethanediol	NT	-	20	OEL Ceiling: 127 mg/m ³	
Ethanediol	BC	10	20	OEL Ceiling: 100 mg/m ³	
Ethanediol	ON	-	-	OEL Ceiling: 100 mg/m ³ (H)	
Ethanediol	AB	-	-	OEL Ceiling: 100 mg/m ³	
Ethanediol	QC	-	-	OEL Ceiling: 127 mg/m ³	
Ethanediol	SK	-	-	OEL Ceiling: 100 mg/m ³ (aerosol)	
Ethanediol	US	-	-	OEL Ceiling: 100 mg/m ³	ACGIH

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 : Use of specific protective industrial clothing is not required under normal conditions of use. Suitable material: neoprene.

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 CSA Z94.4.

Hand protection : Under normal conditions of use specific gloves are not required. Wear suitable gloves in case of frequent or prolonged use and in case of large scale exposure. Suitable material: neoprene. ± 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	: Orange.	
Odour	: Characteristic.	
Odour threshold	: Not known.	
pH	: 10	
Solubility in water	: Soluble.	
Partition coefficient (n-octanol/water)	: Not known.	Not measured. Not relevant for mixtures.
Flash point	: > 100 °C	
Flammability (solid, gas)	: Not applicable.	Liquid. See flashpoint.
Auto ignition temperature	: > 180 °C	
Boiling point/boiling range	: 100 °C	
Melting point/melting range	: < 0 °C	
Explosive properties	: None known.	Does not contain explosives.

Explosion limits (% in air)	: Not known.	Lower explosion limit in air (%): 0,7 (2,2' -Oxybisethanol)
	:	Upper explosion limit in air (%): 37 (2,2' -Oxybisethanol)
Oxidising properties	: Slightly oxidizing.	
Decomposition temperature	: Not known.	
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)	: 1,075 g/ml	
Evaporation rate	: Not known.	

9.2. Other information

Other information : Not relevant.

SECTION 10 STABILITY AND REACTIVITY
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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: > 2,894 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	: 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.
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Corrosion/irritation	: Prolonged contact may dry out and defat the skin. Not classified - based on available data, the classification criteria are not met.
Sensitisation	: Does not contain skin sensitisers. Not classified - based on available data, the classification criteria are not met.
Mutagenicity	: Not expected to be mutagenic. 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 consciousness 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	: Not expected to be mutagenic. 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
Ethanediol	NOAEL (development, oral)	250 mg/kg bw/d		Rat
	LD50 (dermal)	10600 mg/kg bw		
	Mutagenicity	Not mutagenic		
	Genotoxicity - in vitro	Not genotoxic		
	Skin irritation	Non-irritant		Rabbit
	Skin sensitisation	Not sensitizing	OECD 406	Guinea pig
	NOEL (inhalation)	71 mg/m3		
	LD50 (oral)	7712 mg/kg bw	-----	Rat
	Eye irritation	Non-irritant		Rabbit
	LD50 (oral) - estimate	500 mg/kg bw		
	LC50 (inhalation)	> 2500 mg/m3	-----	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3		
	NOAEL (oral)	150 mg/kg bw/d	OECD 452	Rat
	NOEL (carcinogenicity, oral)	1000 mg/kg bw/d		Rat
2,2' -Oxybisethanol	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
LC50 (inhalation) - estimate	> 5000 mg/m3		Rat

Other information : Ethanediol 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): 324 mg/l. Calculated EC50 (waterflea): 203 mg/l. Contains 0 % of components with unknown hazards to the aquatic environment.

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.

12.6. 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.

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

TDG (land)
Class : This product is not classified according to TDG.

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

Regulations : Hazardous Products Regulation 2015 and other regulations.

Substances listed on Canadian Domestic Substances List (DSL)
: Ethanediol ; 2,2' -Oxybisethanol ; sodium nitrite

SECTION 16 OTHER INFORMATION

16.1. Other information

The information in this safety data sheet is compiled in compliance with the Hazardous Products Regulation 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:

ATE	: Acute Toxicity Estimate
CMR	: Carcinogenic, Mutagenic or toxic for Reproduction
DSL	: Domestic Substances List
GHS	: Globally Harmonized System of Classification and Labelling of Chemicals
HPA	: Hazardous Products Act
HPR	: Hazardous Products Regulations
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
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
OSHA	: United States Occupational Safety and Health Administration
PBT	: Persistent, Bioaccumulative and Toxic
REACH	: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	: Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	: Sewage Treatment Plant



SAFETY DATA SHEET

According to the Hazardous Products Regulation 2015

TDG : Transportation of Dangerous Goods
TWA/STEL : Time-Weighted Average/Short Term Exposure Limit
UN : United Nations
VOC : Volatile Organic Compounds
vPvB : Very Persistent and Very Bioaccumulative
WHMIS : Workplace Hazardous Materials Information System
Number format : "," used as decimal separator.

End of safety data sheet.