

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

1.1. Product identifier

Product name : STAR BRITE STAR-TRON SUPER CONCENTRATE GAS ADDITIVE
Product code : 145XX

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

Application : SU21 Consumer product. Engine maintenance.

1.3. Details of the supplier of the safety data sheet

Supplier : Star Brite Europe Inc.
30 rue F. Genin
69005 Lyon, France
Telephone : +33-472-570 133
Fax : +33-472-570 493
E-mail : jp.kitzinger@starbrite-europe.com
Website : www.starbrite-europe.com

1.4. Emergency telephone number

EMERGENCY TELEPHONE NUMBER, for DOCTORS/FIRE BRIGADE/POLICE only:
FR - Telephone : +33-472-570 133 (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

Classification (99/45/EC) : Harmful. Dangerous for the environment.
CLP classification (1272/2008/EC) : Aspiration hazard, category 1. Hazardous to the aquatic environment — Chronic category 3.
Human health hazards : May be fatal if swallowed and enters airways. Repeated exposure may cause skin dryness or cracking.
Physical/chemical hazards : Not classified as dangerous according to statutory EC-Directives. Combustible.
Environmental hazards : Harmful to aquatic life with long lasting effects.
Other information : Keep out of the reach of children. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

2.2. Label elements

Label elements (99/45/EC):
Hazard symbols :



Xn: Harmful

R- and S-phrases : R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
S2 Keep out of the reach of children.

S62

If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Label elements (1272/2008/EC):

Hazard pictograms :



Signal word : Danger

H- and P-phrases :

- H304 May be fatal if swallowed and enters airways.
- H412 Harmful to aquatic life with long lasting effects.
- EUH066 Repeated exposure may cause skin dryness or cracking.
- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P331 Do NOT induce vomiting.
- P405 Store locked up.
- P273 Avoid release to the environment.
- P501 Dispose of contents/container to an official chemical waste depot.

Additional labelling (99/45/EC and/or 1272/2008/EC)

- : Contains: Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, < 2% aromatics
- : Where the mixture is labelled in accordance with Regulation (EC) No 1272/2008 (CLP) the packaging shall (also) carry the text: Contains: Kerosine (petroleum) ; Kerosine (petroleum), hydrodesulfurized

Other information : According to directive 99/45/EC, the packaging of this product shall carry a tactile warning of danger and a child resistant closure. According to regulation (EC) 1272/2008, Annex II, part 3, the packaging of this product shall carry a tactile warning of danger and a child resistant closure.

2.3. Other hazards

Other information : Does not contain PBT or vPvB substances.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

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3.2. Mixtures

Product description : Mixture.

Information on hazardous substances:

Substance name	Concentration (w/w) (%)	CAS nr.	EC number	Symbols	R-phrases
Kerosine (petroleum), hydrodesulfurized	1 - < 5	64742-81-0	265-184-9	Xn; N	10-38-51/53-65
Kerosine (petroleum)	1 - < 5	8008-20-6	232-366-4	Xn; N	10-38-51/53-65
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	> 75	----	926-141-6	Xn	65-66

Reference is made to chapter 16 for full text of each relevant R phrase. Occupational exposure limit(s), if relevant, are listed in section 8.

Substance name	REACH nr.	Hazard Class	Pictograms	H-phrases
Kerosine (petroleum), hydrodesulfurized	01-2119462828-25	Flam. Liq. 3; Asp. Tox. 1; Aquatic Chronic 2; Skin Irrit. 2; STOT SE 3	GHS02; GHS07; GHS08; GHS09	H226; H304; H315; H411; H336

Kerosine (petroleum)	01-2119485517-27	Flam. Liq. 3; Asp. Tox. 1; Skin Irrit. 2; STOT SE 3; Aquatic Chronic 2	GHS02; GHS07; GHS08; GHS09	H226; H304; H315; H336; H411
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	01-2119456620-43	Asp. Tox. 1	GHS08	H304; EUH066

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 persists.
- Eye contact : Wash out with (lukewarm) water for at least 15 minutes. Remove contact lenses. Consult a doctor if irritation persists.
- Ingestion : Do not induce vomiting. Give nothing to drink. Do rinse the mouth. As necessary give 1 or 2 soup spoons of laxative (sodium sulphate). 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 : Repeated exposure may cause skin dryness or cracking.
- Eye contact : May cause stinging of eyes and redness.
- Ingestion : May cause a feeling of sickness, vomiting and diarrhoea. May cause lung damage, sore throat and lack of breath.

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

Note to physicians : None known.

SECTION 5 FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

- Suitable : Carbondioxide (CO2). Foam. Dry chemical. Water fog.
- Not suitable : Water jet.

5.2. Special hazards arising from the substance or mixture

- Special exposure hazards : Will float on water and can be reignited.
- 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. Large spills: contain with dike. Waste product should not be allowed to contaminate soil or water.
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. Keep away from sources of ignition — No smoking. Do not breathe vapour. Avoid contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage : Keep frost-free, in a cool, dry and well-ventilated place (< 35 °C). Keep away from oxidizing agents.
Recommended packaging : Keep only in the original container.
Non recommended packaging : PE and PP.

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/m ³)	STEL 15 min (mg/m ³)	Comments
Kerosine (petroleum), hydrodesulfurized		350	-	CEFIC-HSPA
Kerosine (petroleum)		575	-	CEFIC-HSPA
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, < 2% aromatics		1200	-	CEFIC-HSPA

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. In case of large scale exposure wear suitable protective clothing, overalls or suit, and similar boots. 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 : Under normal conditions of use specific gloves are not required. Wear appropriate gloves in case of frequent or prolonged use and in case of large scale exposure. 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

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9.1. Information on basic physical and chemical properties

- Appearance : Liquid.
- Colour : Colourless.
- Odour : Characteristic.
- Odour threshold : Not known.
- pH : Not applicable. Waterfree product.
- Solubility in water : Not soluble.
- Partition coefficient (n-octanol/water) : Not known.
- Flash point : 69 °C
- Flammability (solid, gas) : Not applicable. Liquid. See flashpoint.
- Auto ignition temperature : > 220 °C
- Boiling point/boiling range : > 100 °C
- Melting point/melting range : Not known.
- Explosive properties : None known. Does not contain explosives.
- Explosion limits (in air) : Not known. Lower explosion limit in air (%): 0,5 (Kerosine (petroleum), hydrodesulfurized)
Upper explosion limit in air (%): 6 Kerosine (petroleum)
- Oxidising properties : Not applicable. Does not contain oxidizing substances.
- Decomposition temperature : Not applicable.
- Viscosity (20°C) : Not known.
- Viscosity (40°C) : < 7 mm2/sec
- Vapour pressure (20°C) : Not known.
- Vapour density (20°C) : > 1 (air = 1)
- Relative density (20°C) : 0,8 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

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11.1. Information on toxicological effects

No toxicological research has been carried out on this product.

Inhalation

- Acute toxicity : Calculated LC50: > 5,203 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 respiratory sensitisers. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Does not contain carcinogenic substances. 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: > 2096 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 : Slight irritation possible. Repeated exposure may cause skin dryness or cracking. 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 : 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 : Calculated LD50: > 4680 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. After ingestion, at vomiting, risk of aspiration in the lungs. May cause lung damage, sore throat and lack of breath. May cause bronchopneumonia.
- Corrosion/irritation : May cause a feeling of sickness, stomachache, vomiting and diarrhoea. Not classified - based on available data, the classification criteria are not met.
- Carcinogenicity : Does not contain carcinogenic substances. 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.

Toxicological information:

Chemical name	Property	Method	Test animal
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Kerosine (petroleum), hydrodesulfurized	Skin sensitisation - estimate	Not sensitizing	Read across	Guinea pig
	NOAEL (development) - estimate	1000 mg/kg.d	Read across	Rat
	Eye irritation - estimate	Slightly irritant	Read across	Rabbit
	Skin irritation - estimate	Irritant	Read across	Rabbit
	NOAEL (inhalation) - estimate	> 1000 mg/m3	Read across	Mouse
	NOAEL (oral) - estimate	750 mg/kg bw/d	Read across	Rabbit
	LD50 (dermal) - estimate	> 2000 mg/kg bw	Read across	Rabbit
	LC50 (inhalation) - estimate	> 5000 mg/m3	Read across	Rat
	LD50 (oral) - estimate	> 5000 mg/kg bw	Read across	Rat
	Skin sensitisation	Not sensitizing	-----	Guinea pig
	NOAEL (development, oral)	1000 mg/kg bw/d	OECD 414	Rat
	NOAEL (fertility, oral)	> 494 mg/kg bw/d	OECD 421	Rat
	Genotoxicity - in vivo	Not genotoxic	OECD 475	Rat
NOAEL (dermal)	> 0,5 mg/kg bw/d	OECD 410	Rat	
NOAEL (inhalation)	> 1000 mg/m3	OECD 413	Rat	
NOAEL (oral)	750 mg/kg bw/d	-----	Rat	
Eye irritation	Non-irritant	-----	Rabbit	
LC50 (inhalation)	> 5280 mg/m3	OECD 403	Rat	
LD50 (dermal)	> 2000 mg/kg bw	OECD 402	Rat	
Skin irritation	Irritant	OECD 404	Rabbit	
Mutagenicity	Negative	OECD 471	Salmonella typhimurium	
Genotoxicity - in vitro	Not genotoxic	OECD 476		
Skin sensitisation	Not sensitizing	OECD 406	Guinea pig	
LD50 (oral)	> 5000 mg/kg bw	-----	Rat	
NOAEL (oral) - estimate	> 5500 mg/kg bw/d	Read across	Rat	
Hydrocarbons, C11-14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	NOAEL (inhalation) - estimate	> 2200 mg/m3	Read across	Rat
	LC50 (inhalation)	> 4950 mg/m3	OECD 403	Rat
	LC50 (inhalation) - estimate	> 5000 mg/m3	-----	-----
	LD50 (oral)	> 5000 mg/kg bw	OECD 401	Rat
	Skin sensitisation	Not sensitizing	OECD 406	-----
	Eye irritation	Non-irritant	OECD 405	Rabbit
	Skin irritation	Non-irritant	OECD 404	Rabbit
	LD50 (dermal)	> 2000 mg/kg bw	OECD 402	Rat
	NOAEL (fertility) - estimate	Not reprotoxic	-----	-----
	NOAEL (development) - estimate	Not teratogenic	-----	-----
	NOEL (carcinogenicity) - estimate	Not carcinogenic		
	Respiratory irritation - estimate	Non-irritant		
	Mutagenicity - estimate	Not mutagenic	Read across	

SECTION 12 ECOLOGICAL INFORMATION

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12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity : Calculated LC50 (fish): 14 mg/l. Calculated EC50 (waterflea): 15 mg/l. Contains < 1 % of components with unknown hazards to the aquatic environment. May form an oil film on the water surface causing a decline in oxygen content with possible adverse effects for aquatic organisms.

12.2. Persistence and degradability

Persistence – degradability : May cause long-term adverse effects in the aquatic environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : No specific information known.

12.4. Mobility in soil

Mobility : Adsorbs to soil and has low mobility. Floats on water.

12.5. Results of PBT and vPvB ass

PBT/vPvB assessment : Does not contain PBT or vPvB substances.

12.6. Other adverse effects

Other information : Not applicable.

Ecological information:

Chemical name	Property		Method	Test animal
Kerosine (petroleum), hydrodesulfurized	LC50 (fish) - estimate	> 2 mg/l	OECD 203	Oncorhynchus mykiss
	NOEC (fish) - estimate	0,098 mg/l.d		
	Ultimate aerobic biodegradation (%)	58,6 %	OECD 301 F	
	NOEC (waterflea) - chronic	0,48 mg/l.d	OECD 211	Daphnia magna
	IC50 (alga)	> 1 mg/l	OECD 201	Pseudokirchnerella subcapitata
Kerosine (petroleum)	EC50 (waterflea)	1,4 mg/l	OECD 202	Daphnia magna
	NOEC (fish)	1 mg/l.d	-----	
	IC50 (alga)	> 1 mg/l		-----
	LC50 (fish)	> 1 mg/l		-----
	EC50 (waterflea)	1,4 mg/l	OECD 202	-----
	NOEC (waterflea) - acute	0,3 mg/l	OECD 202	Daphnia magna
	NOEC (waterflea) - chronic	0,48 mg/l.d	OECD 211	Daphnia magna

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.

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

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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 (road / railway)

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

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

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

Community regulations : Regulation (EC) No 453/2010 (REACH), Regulation (EC) No 1272/2008 (CLP) and other regulations.

15.2. Chemical safety assessment

Chemical safety assessment : Not applicable.

SECTION 16 OTHER INFORMATION

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16.1. Other information

The information in this safety data sheet is compiled in compliance with Regulation (EC) No 453/2010 dated 20 May 2010 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 (*).

Full text of R-phrases mentioned in section 3:

R10	Flammable.
R38	Irritating to skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.

Full text of H-phrases mentioned in section 3:

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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
EU	: European Union
IATA	: International Air Transport Association
IBC	: Intermediate Bulk Container
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
Number format	: "," used as decimal separator.

History

Date of first issue	: 27-05-2005	
Date of second issue	: 14-09-2011	
Date of third issue	: 14-11-2013	
Date of fourth issue	: 16-03-2014	
Date of fifth issue	: 23-10-2014	Herewith all previous issues are expired.