



SAFETY DATA SHEET STAR AIR COOLER CLEANER

PRODUCT CODE: 00910013

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

1.1. Product identifier

Product name STAR AIR COOLER CLEANER

Product number 00910013

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

Identified uses Star Air Cooler Cleaner is a powerful solvent emulsion cleaner for cleaning of diesel engine air coolers, scavenging air systems and compressor side of turbochargers.

1.3. Details of the supplier of the safety data sheet

Supplier STAR International
Star House
Turbine Business Park
Turbine Road
Birkenhead
Merseyside
CH41 9BA
Tel: +44 (0) 1244 504 500
Fax: +44 (0) 1244 504 504
www.star-international.co.uk

1.4. Emergency telephone number

Emergency telephone +44 (0) 1244 504 500 (Office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Asp. Tox. 1 - H304

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger

Hazard statements
H315 Causes skin irritation.
H318 Causes serious eye damage.
H304 May be fatal if swallowed and enters airways.

STAR AIR COOLER CLEANER

Precautionary statements	<p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	KEROSENE ODOURLESS, HYDROCARBONS, C9, AROMATICS, SOLUTION OF NATURAL FATTY ALCOHOLS
Supplementary precautionary statements	<p>P321 Specific treatment (see medical advice on this label).</p> <p>P331 Do NOT induce vomiting.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p>

2.3. Other hazards

Not available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

KEROSENE ODOURLESS		60-100%
CAS number: 64742-47-8	EC number: 926-141-6	REACH registration number: 01-2119456620-43-XXXX
Classification		
Asp. Tox. 1 - H304		
HYDROCARBONS, C9, AROMATICS		10-30%
CAS number: 64742-95-6	EC number: 918-668-5	REACH registration number: 01-2119455851-35-XXXX
Classification		
Flam. Liq. 3 - H226		
STOT SE 3 - H335, H336		
Asp. Tox. 1 - H304		
Aquatic Chronic 2 - H411		
2-BUTOXYETHANOL		10-30%
CAS number: 111-76-2	EC number: 203-905-0	REACH registration number: 01-2119475108-36-XXXX
Classification		
Acute Tox. 4 - H302		
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		

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SOLUTION OF NATURAL FATTY ALCOHOLS	5-10%
CAS number: 68515-73-1	EC number: 500-220-1
	REACH registration number: 01-2119488530-36-XXXX
Classification	
Eye Dam. 1 - H318	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water to drink. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

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

Ingestion	May be fatal if swallowed and enters airways.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.

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

Notes for the doctor	No information available.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	In case of fire, toxic and corrosive gases may be formed.
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5.3. Advice for firefighters

Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Follow precautions for safe handling described in this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge to the aquatic environment. Avoid discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

STAR AIR COOLER CLEANER

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Avoid inhalation of vapours and spray/mists.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry and cool place. Keep away from heat, sparks and open flame.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

KEROSENE ODOURLESS

Long-term exposure limit (8-hour TWA): WEL 1200 mg/m³

2-BUTOXYETHANOL

Long-term exposure limit (8-hour TWA): WEL 25 ppm 123 mg/m³

Short-term exposure limit (15-minute): WEL 50 ppm 246 mg/m³

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

2-BUTOXYETHANOL (CAS: 111-76-2)

Biological limit values	240 mmol butoxyacetic acid/mol creatinine in urine sampling time - Post shift
DNEL	Industry - Dermal; Short term : 89 mg/kg/day Industry - Inhalation; Short term systemic effects: 246 mg/m ³ Industry - Dermal; Long term systemic effects: 125 mg/kg/day Industry - Inhalation; Long term : 98 mg/m ³ Consumer - Dermal; Short term : 89 mg/kg/day Consumer - Inhalation; Long term : 426 mg/m ³ Consumer - Oral; Short term : 26.7 mg/kg/day Consumer - Inhalation; : 147 mg/m ³ Consumer - Inhalation; Long term : 59 mg/m ³ Industry - Inhalation; Short term systemic effects: 1091 mg/m ³ Consumer - Dermal; Long term systemic effects: 75 mg/kg/day Consumer - Oral; Long term systemic effects: 6.3 mg/kg/day

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PNEC	- Fresh water; 8.8 mg/l
	- marine water; 0.88 mg/l
	- Fresh water, Sediment; 8.14 mg/kg
	- Soil; 2.8 mg/kg
	- Sediment (Marinewater); 3.46 mg/kg
	- STP; 463 mg/l

SOLUTION OF NATURAL FATTY ALCOHOLS (CAS: 68515-73-1)

DNEL	Professional - Dermal; systemic effects: 59500 mg/kg/day
	Professional - Inhalation; systemic effects: 490 mg/m ³
	Professional - Dermal; systemic effects: 357000 mg/kg/day
	Consumer - Inhalation; systemic effects: 124 mg/m ³
	Consumer - Oral; systemic effects: 35.7 mg/kg/day
PNEC	- Fresh water; 0.1 mg/l
	- marine water; 0.01 mg/l
	- Sediment (Freshwater); 0.487 mg/kg
	- Sediment (Marinewater); 0.048 mg/kg
	- STP; 560 mg/l
	- Soil; 0.654 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

The following protection should be worn: Chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection

No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: Organic vapour filter.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Characteristic.
pH	pH (concentrated solution): 7.0-8.0

STAR AIR COOLER CLEANER

Flash point >60°C Closed cup.

Relative density ~0.86 @ 20°C

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid No information available.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 17,460.0

Acute toxicity - dermal

ATE dermal (mg/kg) 20,000.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 110.0

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

STAR AIR COOLER CLEANER

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

Inhalation May cause respiratory system irritation.

Ingestion May cause discomfort if swallowed.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage.

Toxicological information on ingredients.

KEROSENE ODOURLESS

Other health effects Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species Rabbit

Skin corrosion/irritation

Skin corrosion/irritation Conclusive data but not sufficient for classification.

Animal data No information available.

Serious eye damage/irritation

Serious eye damage/irritation May cause temporary eye irritation.

Respiratory sensitisation

Respiratory sensitisation There is no evidence that the material can lead to respiratory hypersensitivity.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

STAR AIR COOLER CLEANER**Carcinogenicity**

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

Inhalation

Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing. Vapours in high concentrations are narcotic.

Ingestion May be fatal if swallowed and enters airways.

Skin contact Repeated exposure may cause skin dryness or cracking. Liquid may irritate skin.

Eye contact May cause temporary eye irritation.

2-BUTOXYETHANOL**Acute toxicity - oral**

Acute toxicity oral (LD₅₀ mg/kg) 1,746.0

Species Rat

ATE oral (mg/kg) 1,746.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.0

Species Guinea pig

ATE dermal (mg/kg) 2,000.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 11.0

Skin corrosion/irritation

Animal data No information available.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

STAR AIR COOLER CLEANER**Respiratory sensitisation****Respiratory sensitisation** No information available.**Skin sensitisation****Skin sensitisation** No information available.**Germ cell mutagenicity****Genotoxicity - in vitro** No information available.**Carcinogenicity****Carcinogenicity** No information available.**Reproductive toxicity****Reproductive toxicity - fertility** No information available.**Specific target organ toxicity - single exposure****STOT - single exposure** No information available.**Specific target organ toxicity - repeated exposure****STOT - repeated exposure** No information available.**Aspiration hazard****Aspiration hazard** No information available.**Inhalation** Harmful by inhalation.**Ingestion** Harmful if swallowed.**Skin contact** Harmful in contact with skin. Irritating to skin.**Acute and chronic health hazards** A single exposure may cause the following adverse effects: Central nervous system depression.**Target organs** Eyes Skin Respiratory system, lungs**SOLUTION OF NATURAL FATTY ALCOHOLS****Acute toxicity - oral****Acute toxicity oral (LD₅₀ mg/kg)** 5,000.0**Species** Rat**ATE oral (mg/kg)** 5,000.0**Acute toxicity - dermal****Acute toxicity dermal (LD₅₀ mg/kg)** 2,000.0**Species** Rabbit**SECTION 12: Ecological information****Ecological information on ingredients.****KEROSENE ODOURLESS**

STAR AIR COOLER CLEANER

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

2-BUTOXYETHANOL

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Ecological information on ingredients.

KEROSENE ODOURLESS

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: > 1000 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 1000 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: 20 ppm mg/l, Algae

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 28 days: 0.17 mg/l, rainbow trout (Oncorhynchus mykiss)

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 1.22 mg/l, Daphnia magna

2-BUTOXYETHANOL

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 1474 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1550 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 1840 mg/l, Algae, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEL, 21 days: >100 mg/l, Brachydanio rerio (Zebra Fish)

Chronic toxicity - aquatic invertebrates NOEL, 21 days: 100 mg/l, Daphnia magna

SOLUTION OF NATURAL FATTY ALCOHOLS

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 126 mg/l, Brachydanio rerio (Zebra Fish)

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Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: >100 mg/l, Daphnia magna

Acute toxicity - aquatic plants LC₅₀, 72 hours: 27.11 mg/l, Scenedesmus subspicatus

12.2. Persistence and degradability

Persistence and degradability No data available.

Ecological information on ingredients.

KEROSENE ODOURLESS

Persistence and degradability The product is expected to be biodegradable.

Biodegradation - Degradation 69: 28 days

2-BUTOXYETHANOL

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation (%) 90.4: 28 days

SOLUTION OF NATURAL FATTY ALCOHOLS

Persistence and degradability This surfactant complies with the biodegradability criteria as laid down in regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of the detergent manufacturer.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Ecological information on ingredients.

KEROSENE ODOURLESS

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient No information available.

2-BUTOXYETHANOL

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient : ~ 0.8

12.4. Mobility in soil

Ecological information on ingredients.

KEROSENE ODOURLESS

Mobility The product is insoluble in water and will spread on the water surface. The product contains volatile substances which may spread in the atmosphere.

Surface tension 0.0257 mN/m @ 25°F

STAR AIR COOLER CLEANER

2-BUTOXYETHANOL

Mobility The product is soluble in water.

SOLUTION OF NATURAL FATTY ALCOHOLS

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

KEROSENE ODOURLESS

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

2-BUTOXYETHANOL

Results of PBT and vPvB assessment No information available.

SOLUTION OF NATURAL FATTY ALCOHOLS

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects Not available.

Ecological information on ingredients.

KEROSENE ODOURLESS

Other adverse effects Not determined.

2-BUTOXYETHANOL

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

STAR AIR COOLER CLEANER

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

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

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

Not available.

SECTION 16: Other information

Key literature references and sources for data	Health and Safety Executive (HSE). MARPOL 73/78 Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk. Source: European Chemicals Agency, http://echa.europa.eu/
Revision date	10/04/2020
SDS number	21539
Hazard statements in full	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects.

STAR AIR COOLER CLEANER

Signature

Auguste Little