



SAFETY DATA SHEET STAR AQUASTRONG

PRODUCT CODES: 25 Ltr: 00910026 / 205 Ltr: 00910087

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

1.1. Product identifier

Product name STAR AQUASTRONG
Product number 25 Ltr: 00910026 / 205 Ltr: 00910087

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

Identified uses Star Aquastrong is a heavy duty water based alkaline cleaner. It has numerous cleaning applications including removal of sludge, soot, carbon deposits, greases, vegetable and animal's oils, waxes, grime and dirt.

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 Corr. 1A - H314 Eye Dam. 1 - H318
Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word Danger
Hazard statements H314 Causes severe skin burns and eye damage.

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Precautionary statements	<p>P260 Do not breathe vapour/ spray.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</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>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	SURFAC UN65/95, POTASSIUM HYDROXIDE
Supplementary precautionary statements	<p>P310 Immediately call a POISON CENTER/ doctor.</p> <p>P321 Specific treatment (see medical advice on this label).</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p>

2.3. Other hazards

Not available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SURFAC UN65/95	5-10%
CAS number: 68439-46-3	
Classification	
Acute Tox. 4 - H302	
Eye Dam. 1 - H318	
2-BUTOXYETHANOL	5-10%
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	
POTASSIUM HYDROXIDE	5-10%
CAS number: 1310-58-3	EC number: 215-181-3
	REACH registration number: 01-2119487136-33-XXXX
Classification	
Met. Corr. 1 - H290	
Acute Tox. 4 - H302	
Skin Corr. 1A - H314	
Eye Dam. 1 - H318	

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

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Chemical burns must be treated by a physician.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes. Get medical attention immediately.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention immediately.

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

Skin contact	Causes severe skin burns and eye damage.
Eye contact	Causes severe skin burns and eye damage. 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

Protective actions during firefighting	Containers close to fire should be removed or cooled with water.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

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. Provide adequate ventilation.
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6.2. Environmental precautions

Environmental precautions	Prevent spillage entering a watercourse or sewer, contaminating soil or vegetation. If this is not possible notify police and appropriate authorities immediately. 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

Methods for cleaning up	Stop leak if possible without risk. DO NOT touch spilled material! 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. Avoid the spillage or runoff entering drains, sewers or watercourses.
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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.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a well-ventilated place. May attack some plastics, rubber and coatings.

Storage class Corrosive 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

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

POTASSIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³

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
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

POTASSIUM HYDROXIDE (CAS: 1310-58-3)

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DNEL

Workers - Inhalation; Long term local effects: 1 mg/m³Consumer - Inhalation; Long term local effects: 1 mg/m³

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate general and local exhaust ventilation.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Use 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 liquid contact and repeated or prolonged vapour contact.

Hygiene measures

Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. When using do not eat, drink or smoke. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection

Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Wear a respirator fitted with the following cartridge: High-efficiency particulate filter.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless to pale yellow.
Odour	Characteristic.
pH	pH (concentrated solution): >13
Initial boiling point and range	>100°C
Relative density	~1.07 @ 20°C
Solubility(ies)	Soluble in water.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No information available.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

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Possibility of hazardous reactions Not available.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Avoid contact with acids. Aluminium. Zinc.

10.6. Hazardous decomposition products

Hazardous decomposition products In case of fire, toxic and corrosive gases may be formed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 3,269.91

Acute toxicity - dermal

ATE dermal (mg/kg) 25,000.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 137.5

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

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 No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Irritating to respiratory system.

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Ingestion	Causes severe burns. Swallowing concentrated chemical may cause severe internal injury.
Skin contact	Causes severe skin burns and eye damage.
Eye contact	Causes severe skin burns and eye damage.

Toxicological information on ingredients.

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.

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.

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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

POTASSIUM HYDROXIDE

Acute toxicity - oral

ATE oral (mg/kg) 500.0

SECTION 12: Ecological information

Ecotoxicity The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.

Ecological information on ingredients.

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.

SURFAC UN65/95

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1 - 10 mg/l, Fish

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

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POTASSIUM HYDROXIDE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 80 mg/l, Gambusia affinis (Mosquito fish)

12.2. Persistence and degradability

Persistence and degradability The product is biodegradable.

Ecological information on ingredients.

SURFAC UN65/95

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 a detergent manufacturer.

2-BUTOXYETHANOL

Persistence and degradability

The product is readily biodegradable.

Biodegradation

- Degradation (%) 90.4: 28 days

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Ecological information on ingredients.

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.

2-BUTOXYETHANOL

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.

2-BUTOXYETHANOL

Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Other adverse effects Not available.

Ecological information on ingredients.

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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

14.1. UN number

UN No. (ADR/RID)	1760
UN No. (IMDG)	1760
UN No. (ICAO)	1760
UN No. (ADN)	1760

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, N.O.S. (CONTAINS Potassium Hydroxide)
Proper shipping name (IMDG)	CORROSIVE LIQUID, N.O.S. (CONTAINS Potassium Hydroxide)
Proper shipping name (ICAO)	CORROSIVE LIQUID, N.O.S. (CONTAINS Potassium Hydroxide)
Proper shipping name (ADN)	CORROSIVE LIQUID, N.O.S. (CONTAINS Potassium Hydroxide)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID classification code	C9
ADR/RID label	8
IMDG class	8
ICAO class/division	8
ADN class	8

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-A, S-B

ADR transport category 3

Emergency Action Code 2X

Hazard Identification Number 80
(ADR/RID)

Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL 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 21540

Hazard statements in full H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

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