



SAFETY DATA SHEET STAR CONDENSATE CONTROL

PRODUCT CODE: 00910047

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

1.1. Product identifier

Product name STAR CONDENSATE CONTROL

Product number 00910047

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

Identified uses Liquid neutralisation agent for corrosion control in condensate and feed water.
Neutralises acid contaminants
Condensate is tested for pH to determine dosage level.
Minimum pH should be 8.3 with max pH 8.5-9.
Typical dosage is 0.75 litre per day for 10 ton metric system

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 Flam. Liq. 3 - H226

Health hazards Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Repr. 2 - H361f

Environmental hazards Not Classified

2.2. Label elements

Hazard pictograms



Signal word

Danger

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Hazard statements	H226 Flammable liquid and vapour. H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H361f Suspected of damaging fertility.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P242 Use non-sparking tools. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P501 Dispose of contents/ container in accordance with national regulations.
Contains	CYCLOHEXYLAMINE, MORPHOLINE
Supplementary precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P243 Take action to prevent static discharges. P260 Do not breathe vapour/ spray. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P308+P313 IF exposed or concerned: Get medical advice/ attention. P310 Immediately call a POISON CENTER/ doctor. P321 Specific treatment (see medical advice on this label). P362+P364 Take off contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

2.3. Other hazards

Not available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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CYCLOHEXYLAMINE		10-30%
CAS number: 108-91-8	EC number: 203-629-0	REACH registration number: 01-2119486803-29-XXXX
Classification		
Flam. Liq. 3 - H226		
Acute Tox. 3 - H301		
Acute Tox. 3 - H311		
Skin Corr. 1B - H314		
Repr. 2 - H361f		
MORPHOLINE		5-10%
CAS number: 110-91-8	EC number: 203-815-1	REACH registration number: 01-2119496057-30-XXXX
Classification		
Flam. Liq. 3 - H226		
Acute Tox. 4 - H302		
Acute Tox. 3 - H311		
Acute Tox. 3 - H331		
Skin Corr. 1B - H314		
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.
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.
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

General information	Suspected of damaging fertility.
Inhalation	Harmful if inhaled.
Ingestion	Harmful if swallowed.
Skin contact	Harmful in contact with skin. Causes severe skin burns and eye damage.
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

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5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards The product is non-combustible. Toxic gases or vapours. Flammable liquid and vapour.

5.3. Advice for firefighters

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.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. 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.

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 Keep away from heat, sparks and open flame. Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Earth container and transfer equipment to eliminate sparks from static electricity.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Flammable liquid 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

CYCLOHEXYLAMINE

Long-term exposure limit (8-hour TWA): WEL 10 ppm 41 mg/m³

Short-term exposure limit (15-minute): WEL

MORPHOLINE

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Long-term exposure limit (8-hour TWA): WEL 10 ppm 36 mg/m³

Short-term exposure limit (15-minute): WEL 20 ppm 72 mg/m³

Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through skin.

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

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

When using do not eat, drink or smoke. Wash promptly with soap and water if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet.

Respiratory protection

Use approved respirator if air contamination is above an acceptable level. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination or type ABEK (EN 14387)

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Colourless.
Odour	Ammonia.
pH	pH (concentrated solution): ~12.6
Flash point	54°C Closed cup.
Relative density	~0.99 @ 20°C

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.
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10.3. Possibility of hazardous reactions

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 Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Hazardous decomposition products Toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 454.96

Acute toxicity - dermal

ATE dermal (mg/kg) 1,003.34

Acute toxicity - inhalation

ATE inhalation (gases ppm) 7,070.71

ATE inhalation (vapours mg/l) 30.3

ATE inhalation (dusts/mists mg/l) 5.05

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

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 Suspected of damaging fertility.

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 if inhaled.

Ingestion Harmful if swallowed.

Skin contact Harmful in contact with skin. Causes severe skin burns and eye damage.

Eye contact Causes serious eye damage.

Acute and chronic health hazards May damage fertility.

Toxicological information on ingredients.

CYCLOHEXYLAMINE

Acute toxicity - oral

ATE oral (mg/kg) 100.0

Acute toxicity - dermal

ATE dermal (mg/kg) 300.0

MORPHOLINE

Acute toxicity - dermal

ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation

ATE inhalation (gases ppm) 700.0

ATE inhalation (vapours mg/l) 3.0

ATE inhalation (dusts/mists mg/l) 0.5

SECTION 12: Ecological information

12.1. Toxicity

Toxicity The product is not expected to be hazardous to the environment.

12.2. Persistence and degradability

Persistence and degradability No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

12.4. Mobility in soil

Mobility 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.

12.6. Other adverse effects

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Other adverse effects Not available.

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)	2920
UN No. (IMDG)	2920
UN No. (ICAO)	2920
UN No. (ADN)	2920

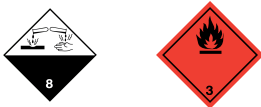
14.2. UN proper shipping name

Proper shipping name (ADR/RID)	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS CYCLOHEXYLAMINE, MORPHOLINE)
Proper shipping name (IMDG)	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS CYCLOHEXYLAMINE, MORPHOLINE)
Proper shipping name (ICAO)	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS CYCLOHEXYLAMINE, MORPHOLINE)
Proper shipping name (ADN)	CORROSIVE LIQUID, FLAMMABLE, N.O.S. (CONTAINS CYCLOHEXYLAMINE, MORPHOLINE)

14.3. Transport hazard class(es)

ADR/RID class	8
ADR/RID subsidiary risk	3
ADR/RID classification code	CF1
ADR/RID label	8
IMDG class	8
IMDG subsidiary risk	3
ICAO class/division	8
ICAO subsidiary risk	3
ADN class	8
ADN subsidiary risk	3

Transport labels



14.4. Packing group

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

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-C
ADR transport category	2
Emergency Action Code	•3W
Hazard Identification Number (ADR/RID)	83
Tunnel restriction code	(D/E)

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

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

Not applicable.

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.
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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/ Supplier's information.
Revision date	15/06/2020
SDS number	21575

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Hazard statements in full

H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H361f Suspected of damaging fertility.

Signature

Auguste Little