1. Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name: Scalcon
MSDS Code: 008497

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

Identified uses: Rust, corrosion and scale remover
Uses advised against: This product is not recommended for any industrial, professional or consumer use other than the identified uses above.

1.3 Details of the supplier of the safety data sheet

Supplier: Sliptech
Brown Oaks Barns
Wivenhoe, Essex
CO7 9JZ

Contact

1.4 Emergency telephone number

Emergency telephone: +44(0) 151 343 1800 Mon-Fri 09.00 - 17.00. If you urgently need medical help or advice but it's not a life-threatening situation, call the 24-hour NHS 111 service to speak to an NHS adviser. Simply call 111 free from a landline or mobile.
2. Hazards Identification

2.1 Classification of the substance or mixture

Classification

Physical hazards
Not classified.

Health hazards

Eye Irrit 2B - H320
Skin Irrit 2 - H315

Environmental hazards
Not classified.

2.2 Label elements

Pictogram

Warning

Hazard statements

H315 + H320: Causes skin and eye irritation R36/38
H335: May cause respiratory irritation R37

Precautionary statements

P280: Wear protective gloves/eye protection
P260: Do not breathe spray
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P302 + P350: IF ON SKIN: Gently wash with plenty of soap and water

Supplementary precautionary statements

2.3 Other hazards

This product contains no substances classified as PBT or vPvB.
3. Composition/Information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS number</th>
<th>EC number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid 28%</td>
<td>7647-1-0</td>
<td>231-595-7</td>
<td>&gt; 60 %</td>
</tr>
</tbody>
</table>

**Classification**

- Acute Tox 4 - H302: Harmful if swallowed R22
- Aquatic Chronic 3 - H412: Harmful to aquatic life with long lasting effects R52/53

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS number</th>
<th>EC number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-dibutyl-2-thiourea</td>
<td>109-46-6</td>
<td>203-674-6</td>
</tr>
</tbody>
</table>

**Classification**

- Acute Tox 4 - H302: Harmful if swallowed R22
- Aquatic Chronic 3 - H412: Harmful to aquatic life with long lasting effects R52/53
4. First Aid Measures

4.1 Description of first aid measures

**Inhalation**
Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

**Ingestion**
Do not induce vomiting. Rinse mouth thoroughly with water. Give plenty of water or preferably milk to drink. Get medical attention immediately.

**Skin**
Remove affected person from source of contamination. Remove contaminated clothing. Rinse immediately with plenty of water. Use suitable lotion to moisturise skin. Get medical attention if any discomfort continues.

**Eyes**
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

4.2 Most important symptoms and effects, both acute and delayed

**General Information**
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
Coughing, chest tightness, feeling of chest pressure.

**Ingestion**
May cause severe discomfort if swallowed. May cause severe throat and stomach pain and/or vomiting.

**Skin**
Prolonged contact may cause redness, irritation and dry skin.

**Eyes**
Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

4.3 Indication of any immediate medical attention and special treatment needed

**Notes for the doctor**
Treatment should be symptomatic. Show the label to medical personnel if possible.
5. Firefighting Measures

5.1 Extinguishing media

Suitable extinguishing media

This product is not flammable. Fire extinguishing media should be selected according to the nature of surrounding materials.

5.2 Special hazards arising from the substance or mixture

Specific hazards

Thermal decomposition or combustion may liberate toxic gases or vapours.

Hazardous combustion products

Vapours may include oxides/compounds of the following: Hydrogen. Chlorine.

5.3 Advice for firefighters

Protective actions during firefighting

Stay up-wind to avoid breathing fumes or vapours. Keep run-off water out of sewers and watercourses. If there is risk of water pollution, notify appropriate authorities.

Special protective equipment for firefighters

Use self-contained breathing apparatus, gloves and protective goggles. Use full protective clothing appropriate for surrounding materials.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Protective equipment required: respiratory protection, protective gloves, goggles, clothing and footwear. See section 8.

6.2 Environmental precautions

Do not discharge into water courses. Place container with damaged side up. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY notified to the Environmental Agency or other appropriate regulatory body.

6.3 Methods and material for containment and cleaning up

Wear suitable protective clothing. Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers.

Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush remaining spilled material to foul sewer if local regulations permit. For waste disposal, see section 13.

6.4 Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Read and follow manufacturer’s recommendations. Observe good chemical hygiene and handling practices. Refer to section 6.1 for personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a cool, dry place.

7.3 Specific end use(s)

Please see section 1.2
8. Exposure Controls/personal protection

8.1 Control parameters
Occupational exposure limits

Statutory and derived exposure data for Hydrochloric Acid 28%

<table>
<thead>
<tr>
<th>Workplace Exposure Limits (WEL)</th>
<th>Derived and predicted exposure parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA - 8hr</td>
<td>DNEL (mg/m3)</td>
</tr>
<tr>
<td>STEL - 15 mins</td>
<td>PNEC</td>
</tr>
<tr>
<td>1 ppm 2 mg/m3</td>
<td>Inhalation Short Term 15.0000</td>
</tr>
<tr>
<td>5 ppm 8 mg/m3</td>
<td>Inhalation Long Term 8.0000</td>
</tr>
<tr>
<td></td>
<td>STP 0.0360 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water 0.0360 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water 0.0360 mg/l</td>
</tr>
</tbody>
</table>

Statutory and derived exposure data for 1,3-dibutyl-2-thiourea

<table>
<thead>
<tr>
<th>Workplace Exposure Limits (WEL)</th>
<th>Derived and predicted exposure parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA - 8hr</td>
<td>DNEL - No data available</td>
</tr>
<tr>
<td>STEL - 15 mins</td>
<td>PNEC - No data available</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Exposure Controls/personal protection - continued

8.2 Exposure controls

Protective equipment

Appropriate engineering controls
No specific ventilation requirements. If this product is used in such a way as to generate spray mist, additional ventilation may be required.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Face shield and chemical splash goggles conforming to ANSI Z87.1.

Hand protection
Use protective gloves, complying with an approved standard, made of the following material:

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Frequent change is advisable.

Other skin and body protection
Wear appropriate protective clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures
Provide eye wash station and suitable hand cleaning/hand care facilities. When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated.

Respiratory protection
Respiratory protection may be required if the usage method generates excessive levels of mist/dust. If necessary, wear a mask fitted with a cartridge P2/P3 suitable for mist/dust.
9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Blue-Green Liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Sharp Acidic</td>
</tr>
<tr>
<td>Solubility - water</td>
<td>Soluble in all proportions</td>
</tr>
<tr>
<td>Solubility - other</td>
<td>n/a</td>
</tr>
<tr>
<td>Boiling point</td>
<td>~ 100°C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>~ 0°C</td>
</tr>
<tr>
<td>Relative density (20°C)</td>
<td>~ 1.11</td>
</tr>
<tr>
<td>Vapour density (air = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not Available</td>
</tr>
<tr>
<td>Evaporation rate (BuAc = 1)</td>
<td>Not available</td>
</tr>
<tr>
<td>pH (Concentrate)</td>
<td>1</td>
</tr>
<tr>
<td>pH (10%)</td>
<td>1</td>
</tr>
<tr>
<td>Decomposition temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour threshold - lower</td>
<td>Not available</td>
</tr>
<tr>
<td>Odour threshold - upper</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point (°C)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto ignition temperature (°C)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient (N-octanol/water)</td>
<td>Not available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Does not meet the criteria for oxidising</td>
</tr>
<tr>
<td>Comments</td>
<td>Information declared as 'Not available' or 'Not applicable' is not considered to be relevant to the implementation of the proper control measures</td>
</tr>
</tbody>
</table>

9.2 Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC (grams/litre)</td>
<td>0</td>
</tr>
<tr>
<td>This is a zero VOC product.</td>
<td></td>
</tr>
</tbody>
</table>

10. Stability and reactivity

10.1 Reactivity

No specific reactivity hazards associated with this product.

10.2 Chemical Stability

Stable under normal temperature conditions.

10.3 Possibility of hazardous reactions

Reaction with alkalis will generate heat.

10.4 Conditions to avoid

Avoid excessive heat for prolonged periods of time.

10.5 Incompatible materials

Strong oxidisers. Bleach (generates toxic gas).

10.6 Hazardous decomposition products

Product does not decompose under normal conditions.
11. Toxicological Information

11.1 Information on toxicological effects

Toxicological effects
No data recorded for mixture

Acute toxicity - oral (Calculated from raw material data. This product is not tested on animals)
ATE oral (mg/kg)
954

Skin corrosion/irritation
Human skin model test
Scientifically unjustified

Extreme pH
Based on In Vitro calculation from pH and Alkali Reserve. Irritating.

General
The severity of the symptoms described may vary according to the concentration and the exposure time.

Inhalation
Spray mist will severely irritate respiratory membranes. Prolonged inhalation of spray mist may damage respiratory system.

Ingestion
May cause burns to mouth, throat and stomach if swallowed.

Skin contact
Irritating to skin.

Eye contact
Severely irritating to eyes. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

Route of entry
Inhalation (spray mist). Ingestion. Skin. Eyes.

Medical symptoms
Symptoms following overexposure may include the following: Skin irritation. Respiratory system irritation.

Medical considerations
People with sensitive skin and/or allergies should take extra care when using this product.

Toxicological information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>LD50口头 (mg/kg)</th>
<th>LD50皮下 (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid 28%</td>
<td>700</td>
<td>&gt;5010</td>
</tr>
<tr>
<td>1,3-dibutyl-2-thiourea</td>
<td>950</td>
<td>1060</td>
</tr>
</tbody>
</table>
12. Ecological Information

The product is not expected to be hazardous to the environment.
The product components are not classified as environmentally hazardous. Large spills may have hazardous effects on the environment.
The product may affect the acidity (pH) of water which may have hazardous effects on aquatic organisms.
The product does not contain organically bound halogen.
The product is not expected to be hazardous to wastewater treatment processes. The product does not contain organic complexing agents with a DOC level of degradation of < 80% after 28 days.

12.1 Toxicity

Acute aquatic toxicity
Details shown in section 08, when applicable.

12.2 Persistence and degradability
The surfactants contained in this product comply 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.
The product is biodegradable but it must not be discharged into drains without permission from the relevant authorities.

12.3 Bioaccumulative potential
This product is not expected to bioaccumulate

12.4 Mobility in soil
The product is soluble in water.

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

12.6 Other adverse effects
Not Determined

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. The packaging must be empty (drop-free when inverted).

Disposal methods
Packaging should be reused, recycled or laundered via a licensed operator wherever possible.

Avoid the spillage or runoff entering watercourses. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Discharge of small quantities to the sewer with plenty of water may be permitted.
The requirements of the local water authority must be complied with if contaminated water is flushed directly to the sewer. Larger quantities should be treated in a suitable plant or disposed of via a licensed waste disposal contractor.
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
ADR/RID :
IMDG :
ICAO :

14.2 UN proper shipping name
ADR/RID :
IMDG :
ICAO :

14.3 Transport hazard class(es)
ADR/RID :
IMDG :
ICAO :
ADN :

Transport labels

None required.

14.4 Packing group
ADR/RID :
IMDG :
ICAO :

14.5 Environmental hazards
Environmentally hazardous substance/marine pollutant
No

14.6 Special precautions for user
IMDG Code segregation group
Not applicable.

EmS
Emergency Action Code

Hazard Identification
Number (ADR/RID)

Tunnel restriction code

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code :
Not applicable.
15. Regulatory Information

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

National Regulations

EU Legislation


Guidance Notes
Workplace Exposure Limits EH40. Safety Data Sheets for Substances and Preparations.

Health and environmental listings

Water hazard classification
WGK 1

15.2 Chemical Safety Assessment
No chemical safety assessment has been carried out.

16. Other Information

General Information
For use by trained personnel only. Read the product label and follow instructions carefully. This product should only be used on the surfaces described on the product.
Do not use or rinse this product in such a way as to generate excessive product mist, as this can cause unnecessary inhalation hazard.

When using this product, ensure that other unprotected personnel, or members of the public, are not exposed. Where necessary, unprotected persons should be excluded from any area where the product is being used.
All users should have access to, and be familiar with, the contents of this data sheet.

If this product is decanted into other containers, ensure that they are suitable, clean and correctly labelled.
Product spills may be very slippery - ensure that spillages are cleaned up immediately and that adequate warnings are given to other personnel.
Unless instructed to do so in writing or on the label, this product should never be mixed with any other.
It may be necessary to check that chemical residues from previous processes have been fully removed before using this product.

Issued by
Prepared by:
Fleming Technical Limited
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Great Britain
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+44 (0) 151 343 1800

Supersedes date
05/01/2009

SDS status
Approved.

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