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

1.1. Product identifier
Name of product Decalcit Super

1.2. Relevant identified uses of the substance or mixture and uses advised against
Recommended intended purpose(s)
Acidic cleaner.

1.3. Details of the supplier of the safety data sheet
Manufacturer/distributor BAYROL Deutschland GmbH
Robert-Koch-Str. 4, D-82152 Planegg
Phone +49 (0) 89 85701-0, Fax +49 (0) 89 85701-276
E-Mail bayrol@bayrol.de
Internet www.bayrol.de

Advice
E-mail (competent person): ASchwarzenboeck@bayrol.de

1.4. Emergency telephone number
Emergency advice Giftnotruf München (oder jedes andere Giftinformationszentrum)
Phone +49 (0) 89 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to 67/548/EEC or 1999/45/EC
C; R34
Xi; R37

R-phrases
34 Causes burns.
37 Irritating to respiratory system.

Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

<table>
<thead>
<tr>
<th>Hazard classes and Hazard categories</th>
<th>Hazard Statements</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met. Corr. 1</td>
<td>H290</td>
<td></td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>H314</td>
<td></td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>H335</td>
<td></td>
</tr>
</tbody>
</table>

Hazard Statements
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

GHS05 GHS07

Signal word
Danger

Hazard Statements
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary Statements
P102 Keep out of reach of children.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

! Hazardous ingredients for labeling
Hydrochloric acid

Special rules for supplemental label elements for certain mixtures
Contains perfume. May produce an allergic reaction.

2.3. Other hazards
Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

! SECTION 3: Composition/ information on ingredients

3.1. Substances
not applicable

3.2. Mixtures
! Hazardous ingredients

<table>
<thead>
<tr>
<th>CAS No</th>
<th>EC No</th>
<th>Name</th>
<th>[% weight]</th>
<th>Classification according to 67/548/EEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>68424-85-1</td>
<td>270-325-2</td>
<td>Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides</td>
<td>&lt; 1</td>
<td>Xn,R21/22; C,R34; N,R50</td>
</tr>
<tr>
<td>7647-01-0</td>
<td>231-595-7</td>
<td>Hydrochloric acid</td>
<td>&lt; 20</td>
<td>C R34; Xi R37</td>
</tr>
</tbody>
</table>
Hazardous ingredients (continued)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>EC No</th>
<th>Name</th>
<th>[% weight]</th>
<th>Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]</th>
</tr>
</thead>
<tbody>
<tr>
<td>68424-85-1</td>
<td>270-325-2</td>
<td>Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides</td>
<td>&lt; 1</td>
<td>Acute Tox. 4, H302 / Acute Tox. 4, H312 / Skin Corr. 1B, H314 / Aquatic Acute, H400 / M10</td>
</tr>
<tr>
<td>7647-01-0</td>
<td>231-595-7</td>
<td>Hydrochloric acid</td>
<td>&lt; 20</td>
<td>Skin Corr. 1B, H314 / STOT SE 3, H335</td>
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</table>

REACH

<table>
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<tr>
<th>CAS No</th>
<th>Name</th>
<th>REACH registration number</th>
</tr>
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<tbody>
<tr>
<td>68424-85-1</td>
<td>Quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides</td>
<td>05-2114132022-72</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Remove contaminated soaked clothing immediately and dispose it safely. Symptoms of poisoning may not occur for hours, therefore medical supervision for at least 48 hours necessary. Adhere to personal protective measures when giving first aid.

In case of inhalation
Remove the casualty into fresh air and keep him immobile. Refer for medical treatment.

In case of skin contact
In case of contact with skin wash off immediately with plenty of water. Refer for medical treatment.

In case of eye contact
Eye rinsing with water carefully while protecting unhurt eye. Call for a doctor immediately.

In case of ingestion
Do not induce vomiting. Call for a doctor immediately. Rinse out mouth and give plenty of water to drink.

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

Physician’s information / possible dangers
Risk of respiratory disorders

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

Treatment (Advice to doctor)
Treat symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Product does not burn, fire-extinguishing activities according to surrounding.

5.2. Special hazards arising from the substance or mixture

In case of fire formation of dangerous gases possible.
Hydrogen chloride (HCl)
5.3. Advice for firefighters
**Special protective equipment for fire-fighters**
Use breathing apparatus with independent air supply.
Wear full protective clothing.

**Additional information**
Cool endangered containers with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

---

### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
No information available.

**For non-emergency personnel**
Ensure adequate ventilation.
Keep people away and stay on the upwind side.
Use personal protective clothing.
Use breathing apparatus if exposed to vapours/dust/aerosol.

6.2. Environmental precautions
Product should not be discharged in an undiluted or non-neutralized form into sewage or the environment.

6.3. Methods and material for containment and cleaning up
Dilute with plenty of water.
Neutralize with sodium carbonate or slaked lime.
Cleaning measures with respiratory protection.
Flush away residues with water.

6.4. Reference to other sections
Safe handling: see section 7
Disposal: see section 13
Personal protection equipment: see section 8
Emergency telephone number: see section 1

---

### SECTION 7: Handling and storage

7.1. Precautions for safe handling
**Advice on safe handling**
No special measures necessary if used correctly.

**General protective measures**
Do not inhale vapours.
Avoid contact with eyes and skin.

**Hygiene measures**
Do not eat or drink when working.
Keep away from food and drink.
Wash hands before breaks and after work.

**Advice on protection against fire and explosion**
The product is not combustible.
No special measures necessary.

7.2. Conditions for safe storage, including any incompatibilities
**Requirements for storage rooms and vessels**
Keep only in original container.
Advisory on storage compatibility
Do not store together with animal feedstuffs.
Do not store together with food.

Further information on storage conditions
Keep container tightly closed.
Store at cool and aired place.

Information on storage stability
Storage time: 5 years.

7.3. Specific end use(s)
Recommendation(s) for intended use
See section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls
Respiratory protection
Short term: filter apparatus, combination filter E-P2
Short term: filter apparatus, combination filter E-P3

Hand protection
chemical-resistant gloves
Suitable materials (recommended: protection index 6, >480 minutes permeation time according to EN 374)
Nitrile-butadiene rubber (NBR) - 0.4 mm layer thickness
Butyl rubber (butyl) - 0.7 mm layer thickness
In view of the many different types, the manufacturers’ directions for use must be followed

Eye protection
Safety goggles

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Appearance
liquid
Colour
red
Odour
pungent

Odour threshold
No information available.

Important health, safety and environmental information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Temperature</th>
<th>at</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH value</td>
<td>1.2</td>
<td>20 °C</td>
<td>10 g/l</td>
<td>potentiometric</td>
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</tr>
<tr>
<td>Boiling temperature / boiling range</td>
<td></td>
<td></td>
<td></td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Melting point / Freezing point</td>
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<td></td>
<td></td>
<td>No information available.</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>not available</td>
<td></td>
<td></td>
<td>applicable</td>
<td></td>
</tr>
</tbody>
</table>
### SECTION 10: Stability and reactivity

#### 10.1. Reactivity
Thermal decomposition can lead to the escape of irritating gases and vapours. Corrosive to metals.

#### 10.2. Chemical stability
No information available.

#### 10.3. Possibility of hazardous reactions
Reactions with metals, with evolution of hydrogen. Reactions with alkalies.

---

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Temperature</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapourisation rate</td>
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</tr>
<tr>
<td>Flammable (solid)</td>
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<tr>
<td>Flammability (gas)</td>
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<tr>
<td>Ignition temperature</td>
<td>No information available.</td>
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<td></td>
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</tr>
<tr>
<td>Self ignition temperature</td>
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<td></td>
</tr>
<tr>
<td>Lower explosion limit</td>
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<td></td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No information available.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No information available.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.07 g/cm³ 20 °C aerometric</td>
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<td></td>
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<tr>
<td>Vapour density</td>
<td>No information available.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in water</td>
<td>multimiscible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility/other</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (log P O/W)</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No information available.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available.</td>
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<td></td>
</tr>
<tr>
<td>9.2. Other information</td>
<td>No information available.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10.4. Conditions to avoid
No information available.

10.5. Incompatible materials
Materials to avoid
Alkali (lye)
Chlorine
Oxidising agent

10.6. Hazardous decomposition products
Hydrogen
Hydrogen chloride (HCl)

Thermal decomposition
Remark No decomposition if used as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritability/Sensitization

<table>
<thead>
<tr>
<th>Value/Validation</th>
<th>Species</th>
<th>Method</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritability skin</td>
<td>corrosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritability eye</td>
<td>corrosive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subacute Toxicity - Carcinogenicity

<table>
<thead>
<tr>
<th>Value</th>
<th>Species</th>
<th>Method</th>
<th>Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutagenicity</td>
<td></td>
<td></td>
<td>No mutagenity, after different in-vitro studies.</td>
</tr>
<tr>
<td>Reproduction-Toxicity</td>
<td></td>
<td></td>
<td>No indications of toxic effects were observed in reproduction studies in animals.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td></td>
<td></td>
<td>No indications of carcinogenic effects are available from long-term trials.</td>
</tr>
</tbody>
</table>

Experiences made from practice
After swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.
Irritates respiratory tract.
Irritates mucous membranes.

Additional information
No toxical dates available.
SECTION 12: Ecological information

12.1. Toxicity
No information available.

12.2. Persistence and degradability
No information available.

12.3. Bioaccumulative potential
No information available.

12.4. Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
Behaviour in sewage plant
The product is an acid. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Recommendations for the product
Remove in accordance with local official regulations.

Recommendations for packaging
Uncontaminated packaging may be taken for recycling.

Recommended cleansing agent
Water

SECTION 14: Transport information

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>IMDG</th>
<th>IATA-DGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1. UN number</td>
<td>1789</td>
<td>1789</td>
</tr>
<tr>
<td>14.2. UN proper shipping name</td>
<td>HYDROCHLORIC ACID</td>
<td>HYDROCHLORIC ACID</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

14.6. Special precautions for user
No information available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available.

**Land and inland navigation transport ADR/RID**
- Hazard label(s) 8
- Tunnel restriction code E
- Classification code C1

! SECTION 15: Regulatory information

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

**Other regulations (EU)**
- Please note:
  - Observe regulation 98/24/EC for employee health protection against the threat of chemical substances in the workplace.

15.2. Chemical Safety Assessment
- Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

**Recommended uses and restrictions**
- National and local regulations concerning chemicals shall be observed.

**Further information**
- Refer to product information paper.
- The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 1.4

**Sources of key data used**
- Results of own researches and examinations
- Literature informations
- Toxicity studies, NIOSH-Tox-Data
- National legislation and regulation

**Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)**
- R 21/22 Harmful in contact with skin and if swallowed.
- R 34 Causes burns.
- R 37 Irritating to respiratory system.
- R 50 Very toxic to aquatic organisms.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.