BriteGuard Surface ACTIVATOR

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

1.1. Product identifier
BriteGuard Surface ACTIVATOR

Further trade names
BO 5831000, 1000 ml
BO 5835000, 5000 ml

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture
Cleaning agent

1.3. Details of the supplier of the safety data sheet
Company name: BOHLE AG
Street: Dieselstr. 10
Place: D-42781 Haan
Telephone: +49 2129 5568-0
Fax: +49 2129 5568-282
E-mail: info@bohle.de
Contact person: Klaus Nehren
Telephone: +49 2129 5568-276
E-mail: MSDS@bohle.de
Internet: www.bohle-group.com
Responsible Department: Chemie

1.4. Emergency telephone number:
Emergency CONTACT (24-Hour-Number):GBK GmbH +49 (0)6132-84463

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Regulation (EC) No. 1272/2008
Hazard categories:
Skin corrosion/irritation: Skin Corr. 1A
Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
Causes severe skin burns and eye damage.
Causes serious eye damage.

2.2. Label elements
Regulation (EC) No. 1272/2008
Hazard components for labelling
methanesulphonic acid
Sulphuric acid
Signal word: Danger

Pictograms:

Hazard statements
H314 Causes severe skin burns and eye damage.

Precautionary statements
P260 Do not breathe vapour/aerosol.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Quantity</th>
<th>EC No</th>
<th>Index No</th>
<th>REACH No</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-75-2</td>
<td>methanesulphonic acid</td>
<td>&lt; 10 %</td>
<td>200-898-6</td>
<td>607-145-00-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Met. Corr. 1, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H302 H312 H314 H318 H335</td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid</td>
<td>&lt; 10 %</td>
<td>231-639-5</td>
<td>016-020-00-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1A; H314</td>
</tr>
</tbody>
</table>

Full text of H and EUH statements: see section 16.

Labelling for contents according to Regulation (EC) No 648/2004

< 5 % non-ionic surfactants.

SECTION 4: First aid measures

4.1. Description of first aid measures

- **General information**
  - Take off immediately all contaminated clothing.
  - Remove affected person from the danger area and lay down.

- **After inhalation**
  - Provide fresh air.
  - If unconscious place in recovery position and seek medical advice.
  - If symptoms persist, call a physician.

- **After contact with skin**
  - Wash with plenty of water.
  - If skin irritation persists, call a physician.

- **After contact with eyes**
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  - Continue rinsing. If symptoms persist, call a physician.

- **After ingestion**
  - Rinse mouth. Let water be drunken in little sips (dilution effect).
  - Do NOT induce vomiting. Call a doctor.
  - Do not allow a neutralisation agent to be drunk.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- **Suitable extinguishing media**
  - Carbon dioxide (CO2), Extinguishing powder, Water spray jet, alcohol resistant foam
Unsuitable extinguishing media
High power water jet

5.2. Special hazards arising from the substance or mixture
In case of fire may be liberated: Carbon monoxide, Carbon dioxide

5.3. Advice for firefighters
In case of fire: Wear self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

Additional information
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Provide adequate ventilation. Wear personal protective equipment.

6.2. Environmental precautions
Do not empty into drains.

6.3. Methods and material for containment and cleaning up
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections
SECTION 7: Handling and storage
SECTION 8: Exposure controls/personal protection
SECTION 13: Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Provide sufficient air exchange and/or exhaust in work rooms.
Provide eye shower and label its location conspicuously

Advice on protection against fire and explosion
Usual measures for fire prevention.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep only in the original container in a cool, well-ventilated place.
Protect against direct sunlight.
Always close containers tightly after the removal of product.

Advice on storage compatibility
Keep away from food, drink and animal feedingstuffs.
Do not store together with: Alkali (lye)

Further information on storage conditions
storage temperature: -5°C - 40°C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>ppm</th>
<th>mg/m³</th>
<th>fibres/ml</th>
<th>Category</th>
<th>Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid (mist)</td>
<td>-</td>
<td>0.05</td>
<td>-</td>
<td>TWA (8 h)</td>
<td>WEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
<td></td>
<td>-</td>
<td>STEL (15 min)</td>
<td>WEL</td>
</tr>
</tbody>
</table>
### DNEL/DMEL values

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Substance</th>
<th>DNEL type</th>
<th>Exposure route</th>
<th>Effect</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-75-2 methanesulphonic acid</td>
<td>Worker DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>19.44 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumer DNEL, long-term</td>
<td>dermal</td>
<td>systemic</td>
<td>8.33 mg/kg bw/day</td>
<td></td>
</tr>
<tr>
<td>7664-93-9 Sulphuric acid</td>
<td>Worker DNEL, long-term</td>
<td>inhalation</td>
<td>systemic</td>
<td>3.89 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### PNEC values

<table>
<thead>
<tr>
<th>Substance</th>
<th>CAS No</th>
<th>Environmental compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>methanesulphonic acid</td>
<td>75-75-2</td>
<td>Freshwater</td>
<td>0.012 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.0012 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>0.0251 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Micro-organisms in STP</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soil</td>
<td>0.00183 mg/kg</td>
</tr>
<tr>
<td>Sulphuric acid</td>
<td>7664-93-9</td>
<td>Freshwater</td>
<td>0.05 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine water</td>
<td>0.00025 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater sediment</td>
<td>0.002 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marine sediment</td>
<td>0.002 mg/kg</td>
</tr>
</tbody>
</table>

### Exposure controls

**8.2 Exposure controls**

**Appropriate engineering controls**

Even in case of a full release, due to the small amount of substances present, it is not expected that exposure limits will be reached. However it is the duty of the user to verify this and follow given exposure limits at the workplace.

**Protective and hygiene measures**

Provide adequate ventilation. Do not breathe vapour/aerosol.
Avoid contact with skin, eyes and clothing. Take off all contaminated clothing immediately.
Keep away from food, drink and animal feedingstuffs. When using do not eat or drink.
Do not smoke. Wash hands before breaks and at the end of workday.

**Eye/face protection**

safety glasses with side-shields conforming to EN166

**Hand protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Recommended material: Butyl caoutchouc (butyl rubber), FKM (fluoro rubber), NBR (Nitrile rubber), CR (polychloroprene, chloroprene rubber)

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Skin protection
impervious clothing DIN EN 13034
Chemical resistant safety shoes

Respiratory protection
In case of inadequate ventilation wear respiratory protection. Combination filtering device (EN 14387)
Recommended Filter type: A-P2

Environmental exposure controls
Do not allow to enter into surface water or drains.

SECTION 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>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>clear</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>pH-Value (at 20 °C):</td>
<td>0,5</td>
</tr>
<tr>
<td>Changes in the physical state</td>
<td></td>
</tr>
<tr>
<td>Initial boiling point and boiling range:</td>
<td>100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;100 °C</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>600 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>not auto-flammable</td>
</tr>
<tr>
<td>Vapour pressure (at 20 °C)</td>
<td>23 hPa</td>
</tr>
<tr>
<td>Density (at 20 °C):</td>
<td>1,09 g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>completely miscible</td>
</tr>
</tbody>
</table>

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity
None under normal processing.

10.2. Chemical stability
No decomposition if used as directed.

10.3. Possibility of hazardous reactions
Exothermic reaction with: Alkali (lye)

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products
None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Exposure route</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-75-2</td>
<td>methanesulphonic acid</td>
<td>oral</td>
<td>LD50</td>
<td>&gt;1000</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>dermal</td>
<td>ATE</td>
<td>1100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid</td>
<td>oral</td>
<td>LD50</td>
<td>2140</td>
<td>Rat</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>CAS No</th>
<th>Chemical name</th>
<th>Aquatic toxicity</th>
<th>Dose</th>
<th>[h]</th>
<th>[d]</th>
<th>Species</th>
<th>Source</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-75-2</td>
<td>methanesulphonic acid</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>10-100</td>
<td>96 h</td>
<td>Oncorhynchus mykiss (Rainbow trout)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute crustacea toxicity</td>
<td>EC50</td>
<td>10-100</td>
<td>48 h</td>
<td>Daphnia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7664-93-9</td>
<td>Sulphuric acid</td>
<td>Acute fish toxicity</td>
<td>LC50</td>
<td>82 mg/l</td>
<td>96 h</td>
<td>Brachydanio rerio (zebra-fish)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

Further information

The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.
The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances

Classified as hazardous waste.

Waste disposal number of used product

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances

Classified as hazardous waste.
Waste disposal number of contaminated packaging
150110 WASTE PACKAGING; ABSORBENTS, WIPE CLOths, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances
Classified as hazardous waste.

Contaminated packaging
Packing which cannot be properly cleaned must be disposed of.

SECTION 14: Transport information

Land transport (ADR/RID)
14.1. UN number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. methanesulphonic acid, Sulphuric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Classification code: C1
Special Provisions: 274
Limited quantity: 5 L
Excepted quantity: E1
Transport category: 3
Hazard No: 80
Tunnel restriction code: E

Inland waterways transport (ADN)
14.1. UN number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. methanesulphonic acid, Sulphuric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Classification code: C1
Special Provisions: 274
Limited quantity: 5 L
Excepted quantity: E1

Marine transport (IMDG)
14.1. UN number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. methanesulphonic acid, Sulphuric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
BriteGuard Surface ACTIVATOR

Revision date: 26.07.2017
Product code: BO5835000

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Limited quantity: 5 L
Excepted quantity: E1
EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. methanesulphonic acid, Sulphuric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8

Special Provisions: A3 A803
Limited quantity Passenger: 1 L
Passenger LQ: Y841
Excepted quantity: E1
IATA-packing instructions - Passenger: 852
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 856
IATA-max. quantity - Cargo: 60 L

SECTION 15: Regulatory information

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

EU regulatory information
Restrictions on use (REACH, annex XVII):
Entry 3: Sulphuric acid

National regulatory information
Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): - - not water contaminating

15.2. Chemical safety assessment
Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Relevant H and EUH statements (number and full text)
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor’s safety data sheet.)