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

1.1. Product identifier

Identification of the substance/preparation

n-Butyric acid AF

CAS-No 107-92-6
EC No. 203-532-3
Registration number (REACH) 01-2119488986-11

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

Identified uses
Intermediate under non-strictly controlled conditions
Distribution of substance***

Uses advised against
None

1.3. Details of the supplier of the safety data sheet

Company/Undertaking OXEA GmbH
Identification Rheinpromenade 4A
D-40789 Monheim
Germany

Product Information Product Stewardship
FAX: +49 (0)208 693 2053
email: psq@oxea-chemicals.com

1.4. Emergency telephone number

Emergency telephone number +44 (0) 1235 239 671 (UK) available 24/7

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

This substance is classified based on Directive 1272/2008/EC and its amendments (CLP Regulation)

Acute oral toxicity Category 4, H302
Skin corrosion/irritation Category 1B, H314
Serious eye damage/eye irritation Category 1, H318

Additional information
For full text of Hazard- and EU Hazard-statements see SECTION 16.

2.2. Label elements

Labelling according to Regulation 1272/2008/EC and its amendments (CLP Regulation).

Hazard pictograms
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Signal word

Danger

Hazard statements
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.

Precautionary statements
P233: Keep container tightly closed.
P260: Do not breathe gas/mist/vapours.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor.

2.3. Other hazards

Vapours may form explosive mixture with air
Components of the product may be absorbed into the body by inhalation

PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

SECTION 3: Composition / information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>REACH-No</th>
<th>1272/2008/EC</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyric acid</td>
<td>107-92-6</td>
<td>01-2119488986-11</td>
<td>Acute Tox. 4; H302</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1B; H314</td>
<td>&gt; 99,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1; H318</td>
<td></td>
</tr>
</tbody>
</table>

For full text of Hazard- and EU Hazard-statements see SECTION 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Keep at rest. Aerate with fresh air. When symptoms persist or in all cases of doubt seek medical advice.

Eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.
Skin
Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt seek medical advice.

Ingestion
Call a physician immediately. Do not induce vomiting without medical advice.

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

Main symptoms
nausea, vomiting, convulsions, shortness of breath, discomfort.

Special hazard
Lung irritation, Stomach perforation, Lung oedema, Methemoglobinemia.

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

General advice
Remove contaminated, soaked clothing immediately and dispose of safely. First aider needs to protect himself.

Treat symptomatically. If ingested, flush stomach and compensate acidosis.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
foam, dry chemical, carbon dioxide (CO2), water spray

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Under conditions giving incomplete combustion, hazardous gases produced may consist of:
carbon monoxide (CO)
carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons
Vapours are heavier than air and may spread along floors
Vapours may form explosive mixture with air

5.3. Advice for firefighters

Special protective equipment for firefighters
Fire fighter protection should include a self-contained breathing apparatus (NIOSH-approved or EN 133) and full fire-fighting turn out gear.

Precautions for firefighting
Keep people away from and upwind of fire. Cool containers / tanks with water spray. Water run-off and vapor cloud may be corrosive. Dike and collect water used to fight fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel: For personal protective equipment see section 8. Avoid contact with skin and eyes. Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Keep away from heat and sources of ignition.
For emergency responders: Personal protection see section 8.

6.2. Environmental precautions
Prevent further leakage or spillage. Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

6.3. Methods and material for containment and cleaning up
Methods for containment
Stop the flow of material, if possible without risk. Dike spilled material, where this is possible.

Methods for cleaning up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Dispose of in accordance with local regulations. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).

6.4. Reference to other sections
For personal protective equipment see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Provide sufficient air exchange and/or exhaust in work rooms.

Hygiene measures
When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Advice on the protection of the environment
See Section 8: Environmental exposure controls.

Incompatible products
bases
amines
strong oxidizing agents

7.2. Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). In case of fire, emergency cooling with water spray should be available. Ground and bond containers when transferring material. Vapours may form explosive mixture with air.

Technical measures/Storage conditions
Keep containers tightly closed in a cool, well-ventilated place. Handle and open container with care.
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Suitable material
stainless steel, Polyethylene

Unsuitable material
iron

Temperature class
T2

7.3. Specific end use(s)
Intermediate under non-strictly controlled conditions
Distribution of substance***

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Exposure limits Egypt
No exposure limits established.

Exposure limits Israel
No exposure limits established.

Exposure limits South Africa
No exposure limits established.

Exposure limits United Arab Emirates
No exposure limits established.

Exposure limits Kuweit
No exposure limits established.

Occupational Exposure Controls

8.2. Exposure controls

Appropriate Engineering controls
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Personal protective equipment
General industrial hygiene practice
Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures
When using, do not eat, drink or smoke. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product.

Eye protection
Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

Hand protection
Wear protective gloves. Recommendations are listed below. Other protective material may be used, depending on the situation, if adequate degradation and permeation data is available. If other chemicals are used in conjunction with this chemical, material selection should be based on protection for all chemicals present.

Suitable material: butyl-rubber
Evaluation according to EN 374: level 6
Glove thickness approx 0.7 mm
Break through time approx 480 min

Suitable material: nitrile rubber
Evaluation according to EN 374: level 6
Glove thickness approx 0.55 mm
Break through time > 480 min

Skin and body protection
Impervious clothing. Wear face-shield and protective suit for abnormal processing problems.

Respiratory protection
Respirator with filter for organic vapour. Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust). Equipment should conform to NIOSH, EN or other applicable national standards.

Environmental exposure controls
If possible use in closed systems. If leakage can not be prevented, the substance needs to be suck off at the emersion point, if possible without danger. Observe the exposure limits, clean exhaust air if needed. If recycling is not practicable, dispose of in compliance with local regulations. Inform the responsible authorities in case of leakage into the atmosphere, or of entry into waterways, soil 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>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>foul smelling</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>0.001 mg/m³</td>
</tr>
<tr>
<td>pH</td>
<td>2 (50 % in water @ 20 °C (68 °F))</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>-7 °C (Pour point)</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>164 °C @ 1013 hPa***</td>
</tr>
<tr>
<td>Flash point</td>
<td>71 °C @ 1013 hPa***</td>
</tr>
<tr>
<td>Method</td>
<td>ISO 2719</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Does not apply, the substance is a liquid</td>
</tr>
</tbody>
</table>
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Lower explosion limit 2 Vol %
Upper explosion limit 10 Vol %

Vapour pressure

<table>
<thead>
<tr>
<th>Values [hPa]</th>
<th>Values [kPa]</th>
<th>Values [atm]</th>
<th>@ °C</th>
<th>@ °F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.1</td>
<td>0.001</td>
<td>20</td>
<td>68</td>
<td>DIN EN 13016-2***</td>
</tr>
<tr>
<td>9</td>
<td>0.9</td>
<td>0.009</td>
<td>50</td>
<td>122</td>
<td>DIN EN 13016-2***</td>
</tr>
</tbody>
</table>

Vapour density 3.0 (Air = 1) @ 20 °C (68 °F)

Relative density

<table>
<thead>
<tr>
<th>Values</th>
<th>@ °C</th>
<th>@ °F</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.957</td>
<td>20</td>
<td>68</td>
<td>DIN 51757</td>
</tr>
</tbody>
</table>

Solubility miscible, in water, OECD 105

log Pow 1.1 (measured), OECD 117

Autoignition temperature 435 °C

Method DIN 51794

Decomposition temperature No data available

Viscosity 1.67 mPa*s @ 20 °C

Method DIN 51562, dynamic

Oxidizing properties Does not apply, substance is not oxidising. There are no chemical groups associated with oxidizing properties

Explosive properties Does not apply, substance is not explosive. There are no chemical groups associated with explosive properties

9.2. Other information

Molecular weight 88.11
Molecular formula C4 H8 O2
Refractive index 1.398 @ 20 °C
Surface tension 68.5 mN/m (1 g/l @ 20°C (68°F)), OECD 115

SECTION 10: Stability and Reactivity

10.1. Reactivity

The reactivity of the product corresponds to the typical reactivity shown by the substance group as described in any text book on organic chemistry.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air.

10.4. Conditions to avoid

Avoid contact with heat, sparks, open flame and static discharge. Avoid any source of ignition.

10.5. Incompatible materials
bases, amines, strong oxidizing agents.

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure: Ingestion, Inhalation, Eye contact, Skin contact

<table>
<thead>
<tr>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyric acid (107-92-6)</td>
</tr>
<tr>
<td>Routes of Exposure</td>
</tr>
<tr>
<td>Oral</td>
</tr>
<tr>
<td>Dermal</td>
</tr>
<tr>
<td>Inhalative</td>
</tr>
</tbody>
</table>

Butyric acid, CAS: 107-92-6

Assessment

The available data lead to the classification given in section 2

Irritation and corrosion

<table>
<thead>
<tr>
<th>Butyric acid (107-92-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Organ Effects</td>
</tr>
<tr>
<td>Skin</td>
</tr>
<tr>
<td>Eyes</td>
</tr>
</tbody>
</table>

Butyric acid, CAS: 107-92-6

Assessment

The available data lead to the classification given in section 2

For respiratory irritation, no data are available

Butyric acid, CAS: 107-92-6

Assessment

Skin sensitization was not tested due to the corrosive properties of the substance

For respiratory sensitization, no data are available

Subacute, subchronic and prolonged toxicity

<table>
<thead>
<tr>
<th>Butyric acid (107-92-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Subchronic toxicity***</td>
</tr>
</tbody>
</table>

Butyric acid, CAS: 107-92-6

Assessment

Based on available data, the classification criteria are not met for: STOT RE***

Carcinogenicity, Mutagenicity, Reproductive toxicity

<table>
<thead>
<tr>
<th>Butyric acid (107-92-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Mutagenicity</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Mutagenicity</th>
<th>(Chromosomal Aberration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutagenicity</td>
<td>negative OECD 471 (Ames)</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>negative OECD 474 read across in vivo***</td>
</tr>
<tr>
<td>Developmental Toxicity</td>
<td>rat OECD 414, Inhalative read across</td>
</tr>
<tr>
<td>Developmental Toxicity</td>
<td>rabbit OECD 414, Inhalative read across</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>rat, male/female OECD 416 read across</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>CHO (Chinese Hamster Ovary) cells negative OECD 476 (Mammalian Gene Mutation)</td>
</tr>
</tbody>
</table>

**Butyric acid, CAS: 107-92-6**

**CMR Classification**
The available data on CMR properties are summarized in the table above. They do not indicate a classification into categories 1A or 1B

**Evaluation**
In vitro tests did not show mutagenic effects
Did not show mutagenic effects in animal experiments
In the absence of specific alerts no cancer testing is required***

**Butyric acid, CAS: 107-92-6**

**Main symptoms**
nausea, vomiting, convulsions, shortness of breath.

**Target Organ Systemic Toxicant - Single exposure**
Based on available data, the classification criteria are not met for:
STOT SE

**Target Organ Systemic Toxicant - Repeated exposure**
Based on available data, the classification criteria are not met for:
STOT RE***

**Aspiration toxicity**
Due to the viscosity, this product does not present an aspiration hazard***

**Other adverse effects**
Components of the product may be absorbed into the body by inhalation.

**Note**
Handle in accordance with good industrial hygiene and safety practice. Further details on substance data can be found in the registration dossier under the following link:

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Acute aquatic toxicity**

**Butyric acid (107-92-6)**

<table>
<thead>
<tr>
<th>Species</th>
<th>Exposure time</th>
<th>Dose</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daphnia magna (Water flea)</td>
<td>48h</td>
<td>EC50: 51,25 mg/l</td>
<td>read across DIN 38412, part 11***</td>
</tr>
<tr>
<td>Desmodesmus subspicatus</td>
<td>72h</td>
<td>EC50: 45,1 mg/l</td>
<td>read across DIN 38412,</td>
</tr>
</tbody>
</table>
12.2. Persistence and degradability

Butyric acid, CAS: 107-92-6
Biodegradation
100 % (14 d), Sewage, aerobic, OECD 301 E.

Abiotic Degradation
Butyric acid (107-92-6)

<table>
<thead>
<tr>
<th>Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrolysis***</td>
<td>not expected***</td>
<td></td>
</tr>
<tr>
<td>Photolysis***</td>
<td>No data available***</td>
<td></td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

Butyric acid (107-92-6)

<table>
<thead>
<tr>
<th>Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>log Pow</td>
<td>1,1</td>
<td>measured, OECD 117</td>
</tr>
<tr>
<td>log BCF***</td>
<td>0,5***</td>
<td>calculated***</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

Butyric acid (107-92-6)

<table>
<thead>
<tr>
<th>Type</th>
<th>Result</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface tension</td>
<td>68,5 mN/m (1 g/l @ 20°C (68°F))</td>
<td>OECD 115</td>
</tr>
<tr>
<td>Adsorption/Desorption***</td>
<td>log Koc: 1,69 log Koc: 1,69 @ pH 7***</td>
<td>calculated***</td>
</tr>
<tr>
<td>Distribution to environmental compartments***</td>
<td>Air: 6,16 % Soil: 57,1 % Water: 36,7 % Sediment: 0,07 %***</td>
<td>calculated Fugacity Model Level III***</td>
</tr>
</tbody>
</table>

12.5. Results of PBT and vPvB assessment

Butyric acid, CAS: 107-92-6
PBT and vPvB assessment
This substance is not considered to be persistent, bioaccumulating nor toxic (PBT), nor very persistent nor very bioaccumulating (vPvB)

12.6. Other adverse effects

Butyric acid, CAS: 107-92-6
No data available

SECTION 13: Disposal considerations
13.1. Waste treatment methods

**Product Information**
Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal. Hazardous waste according to European Waste Catalogue (EWC)

**Uncleaned empty packaging**
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

### SECTION 14: Transport information

#### ADR/RID

<table>
<thead>
<tr>
<th>14.1. UN number</th>
<th>UN 2820</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Butyric acid</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>III</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>no</td>
</tr>
<tr>
<td>14.6. Special precautions for user</td>
<td></td>
</tr>
<tr>
<td>ADR Tunnel restriction code</td>
<td>(E)</td>
</tr>
<tr>
<td>Classification Code</td>
<td>C3</td>
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<tr>
<td>Hazard Number</td>
<td>80</td>
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#### ADN

<table>
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</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>III</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>no</td>
</tr>
<tr>
<td>14.6. Special precautions for user</td>
<td></td>
</tr>
<tr>
<td>Classification Code</td>
<td>C3</td>
</tr>
<tr>
<td>Hazard Number</td>
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</table>

#### ICAO-TI / IATA-DGR

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<thead>
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<td>Butyric acid</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>III</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>no</td>
</tr>
<tr>
<td>14.6. Special precautions for user</td>
<td></td>
</tr>
<tr>
<td>Classification Code</td>
<td>C3</td>
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<tr>
<td>Hazard Number</td>
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#### IMDG

<table>
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<tbody>
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<td>Butyric acid</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>8</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>III</td>
</tr>
<tr>
<td>14.5. Environmental hazards</td>
<td>no</td>
</tr>
<tr>
<td>14.6. Special precautions for user</td>
<td></td>
</tr>
<tr>
<td>Classification Code</td>
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<td>Hazard Number</td>
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14.1. UN number UN 2820
14.2. UN proper shipping name Butyric acid
14.3. Transport hazard class(es) 8
14.4. Packing group III
14.5. Environmental hazards no
14.6. Special precautions for user EmS F-A, S-B
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Product name Butyric acid
Ship type 3
Pollution category Y

SECTION 15: Regulatory information

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

Regulation 1272/2008, Annex VI

Butyric acid, CAS: 107-92-6
Classification Skin Corr. 1B; H314
Hazard pictograms GHS05 Corrosion
Signal word Danger
Hazard statements H314

International Inventories

Butyric acid, CAS: 107-92-6
AICS (AU)***
DSL (CA)***
IECSC (CN)***
EC-No. 2035323 (EU)***
ENCS (2)-608 (JP)***
ISHL (2)-608 (JP)***
KECI KE-03838 (KR)***
INSQ (MX)***
PCCS (PH)***
TSCA (US)***
NZIoC (NZ)***
TCSI (TW)***

National regulatory information Egypt

Banned Chemicals (Unified List of Hazardous Substances, List A)
not listed

Substances Requiring Permits (Unified List of Hazardous Substances, List B)
not listed
Non-Restricted Substances (Unified List of Hazardous Substances, List C)  
not listed

**National regulatory information Israel**

Harmful Chemicals (Hazardous Substances Law, 5753-1993, Annex 1)  
not listed

Toxic Chemicals (Hazardous Substances Law, 5753-1993, Annex 2)  
not listed

Hazardous materials requiring annual testing (Labor Inspection Regs., Appendix 1)  
not listed

Hazardous Substances Regulations (Classification & Exemptions)  
not listed

**National regulatory information South Africa**

Group 1 Hazardous Substances (G.N.R 452)  
not listed

**National regulatory information United Arab Emirates**

Prohibited and restricted imports (Ministry of Environment and Water)  
not listed

For details and further information please refer to the original regulation.

**SECTION 16: Other information**

Full text of H-Statements referred to under sections 2 and 3  
H302: Harmful if swallowed.  
H314: Causes severe skin burns and eye damage.  
H318: Causes serious eye damage.

**Abbreviations**

A table of terms and abbreviations can be found under the following link:  

**Training advice**

For effective first-aid, special training / education is needed.

**Sources of key data used to compile the datasheet**

Information contained in this safety data sheet is based on Oxea owned data and public sources deemed valid or acceptable. The absence of data elements required by OSHA, ANSI or Annex II, Regulation 1907/2006/EC indicates, that no data meeting these requirements is available.

**Further information for the safety data sheet**

Changes against the previous version are marked by ***. Observe national and local legal requirements. For more information, other material safety data sheets or technical data sheets please consult the Oxea homepage (www.oxea-chemicals.com).

**Disclaimer**

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End of Safety Data Sheet