1 Identification

- Product identifier
  - Trade name: OXALIC ACID, 2% AQUEOUS
  - Article number: 26693-06, 26201-06

- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.

2 Hazard(s) identification

- Classification of the substance or mixture
  
  GHS05 Corrosion

  Skin Corr. 1A  H314  Causes severe skin burns and eye damage.

  GHS07

  Acute Tox. 4  H302  Harmful if swallowed.
  Acute Tox. 4  H312  Harmful in contact with skin.
  Acute Tox. 4  H332  Harmful if inhaled.

- Label elements
- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms

  GHS05  GHS07

- Signal word Danger

- Hazard-determining components of labeling:
  oxalic acid

- Hazard statements
  Harmful if swallowed, in contact with skin or if inhaled.
  Causes severe skin burns and eye damage.

- Precautionary statements
  Do not breathe dusts or mists.
Wear protective gloves / protective clothing.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
If swallowed: Call a poison center/doctor if you feel unwell.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

- NFPA ratings (scale 0 - 4)
  - Health = 3
  - Fire = 0
  - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - Health = 4
  - Fire = 0
  - Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components:
  - 144-62-7 oxalic acid ≤ 2.5%

4 First-aid measures

- Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact: Immediately wash with water and soap and rinse thoroughly.
  - After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  - After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed No further relevant information available.
Trade name: OXALIC ACID, 2% AQUEOUS

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Use neutralizing agent.
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
- Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: Keep receptacle tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
Trade name: OXALIC ACID, 2% AQUEOUS

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>144-62-7 oxalic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEL</strong></td>
</tr>
<tr>
<td>Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td><strong>REL</strong></td>
</tr>
<tr>
<td>Short-term value: 2 mg/m³</td>
</tr>
<tr>
<td>Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td><strong>TLV</strong></td>
</tr>
<tr>
<td>Short-term value: 2 mg/m³</td>
</tr>
<tr>
<td>Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td>NIC-oxalic acid, anhydrous and dihydrate</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
- **Personal protective equipment:**
  - **General protective and hygienic measures:**
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes and skin.
  - **Breathing equipment:**
    - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
  - **Protection of hands:**
    - **Protective gloves**
      - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
      - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
  - **Material of gloves**
    - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - **Penetration time of glove material**
    - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection:**
    - Tightly sealed goggles

---

**9 Physical and chemical properties**

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
  - **Form:** Liquid
  - **Color:** Clear

(Contd. on page 5)
Safety Data Sheet
acc. to OSHA HCS

Trade name: OXALIC ACID, 2% AQUEOUS

- Odor: Characteristic
- Odour threshold: Not determined.
- pH-value at 20 °C (68 °F): 0.8
- Change in condition
  - Melting point/Melting range: Undetermined.
  - Boiling point/Boiling range: 100 °C (212 °F)
- Flash point: Not applicable.
- Flammability (solid, gaseous): Not flammable.
- Ignition temperature:
  - Decomposition temperature: Not determined.
- Auto igniting: Product is not selfigniting.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
- Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)
- Density at 20 °C (68 °F): 1.04505 g/cm³ (8.721 lbs/gal)
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with
  - Water: Fully miscible.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Solvent content:
  - Organic solvents: 0.0 %
  - Water: 98.0 %
- Solids content: 5.0 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - Primary irritant effect:
    - on the skin: Strong caustic effect on skin and mucous membranes.
    - on the eye: Strong caustic effect.
    - Sensitization: No sensitizing effects known.
  - Additional toxicological information: The product shows the following dangers according to internally approved calculation methods for preparations: Corrosive Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer) None of the ingredients is listed.
  - NTP (National Toxicology Program) None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety Health Administration) None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability No further relevant information available.
  - Behavior in environmental systems:
  - Bioaccumulative potential No further relevant information available.
  - Mobility in soil No further relevant information available.
  - Additional ecological information:
    - General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized. Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
## 41. Uncleaned packagings:
- **Recommendation**: Disposal must be made according to official regulations.
- **Recommended cleansing agent**: Water, if necessary with cleansing agents.

## 14 Transport information

- **UN-Number**: Void
- **DOT, ADR, IMDG, IATA**: Void
- **UN proper shipping name**: Void
- **DOT, ADR, IMDG, IATA**: Void
- **Transport hazard class(es)**:
  - **DOT, ADR, IMDG, IATA**: Void
  - **Class**: Void
- **Packing group**:
  - **DOT, ADR, IMDG, IATA**: Void
- **Environmental hazards**: No
- **Marine pollutant**: No
- **Special precautions for user**: Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**: Not applicable.
- **UN "Model Regulation"**: -

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
  - **Section 355 (extremely hazardous substances)**: None of the ingredients is listed.
  - **Section 313 (Specific toxic chemical listings)**: None of the ingredients is listed.
  - **TSCA (Toxic Substances Control Act)**: All ingredients are listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer**: None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for females**: None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for males**: None of the ingredients is listed.
    - **Chemicals known to cause developmental toxicity**: None of the ingredients is listed.
Carcinogenic categories

- EPA (Environmental Protection Agency)
  None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)
  None of the ingredients is listed.

- NIOSH-Ca (National Institute for Occupational Safety and Health)
  None of the ingredients is listed.

GHS label elements
The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard determinating components of labeling:
oxalic acid

Hazard statements
Harmful if swallowed, in contact with skin or if inhaled.
Causes severe skin burns and eye damage.

Precautionary statements
Do not breathe dusts or mists.
Wear protective gloves / protective clothing.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
If swallowed: Call a poison center/doctor if you feel unwell.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Wash contaminated clothing before reuse.
If swallowed: Rinse mouth. Do NOT induce vomiting.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

16 Other information
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation / last revision 07/11/2015 / -

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
Trade name: OXALIC ACID, 2% AQUEOUS

ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
1 Identification of the substance/mixture and of the company/undertaking

- Product identifier
  - Trade name: OXALIC ACID, 2% AQUEOUS
  - Article number: 26693-06, 26201-06
- Relevant identified uses of the substance or mixture and uses advised against
  No further relevant information available.
- Application of the substance / the mixture
  Laboratory chemicals
- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400  Fax: 215-412-8450
    email: sgkcck@aol.com
    www.emsdiasum.com
  ProSciTech Pty Ltd
  11 Carlton Street, Kirwan QLD 4817 Australia
  Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
  Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
  Emgrid Australia Pty. Ltd.
  P.O. Box 118
  The Patch VIC 3792
  Australia
  Tel: 03 9752 1785
  Fax: 03 9752 1784
  Website: www.emgrid.com.au
- Further information obtainable from: Product safety department
- Emergency telephone number:
  ChemTrec 1-800-424-9300 Contract CCN7661
  1-703-527-3887

2 Hazards identification

- Classification of the substance or mixture
  - GHS05 corrosion
    Skin Corr. 1A  H314  Causes severe skin burns and eye damage.
  - GHS07
    Acute Tox. 4  H302  Harmful if swallowed.
    Acute Tox. 4  H312  Harmful in contact with skin.
    Acute Tox. 4  H332  Harmful if inhaled.
- Label elements
- GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
Trade name: OXALIC ACID, 2% AQUEOUS

· Hazard pictograms

GHS05  GHS07

· Signal word Danger

· Hazard-determining components of labelling:
oxalic acid

· Hazard statements
  Harmful if swallowed, in contact with skin or if inhaled.
  Causes severe skin burns and eye damage.

· Precautionary statements
  Wear protective gloves / protective clothing.
  Wash thoroughly after handling.
  Do not eat, drink or smoke when using this product.
  Use only outdoors or in a well-ventilated area.
  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  Continue rinsing.
  Immediately call a POISON CENTER/doctor.
  Specific treatment (see on this label).
  IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  Wash contaminated clothing before reuse.
  IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
  Take off contaminated clothing and wash it before reuse.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· Other hazards
· Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterisation: Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:
  144-62-7 oxalic acid \(\leq 2.5\%\)

· Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

· Description of first aid measures

· General information: Immediately remove any clothing soiled by the product.
  · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact: Immediately wash with water and soap and rinse thoroughly.
  · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
  · After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
<table>
<thead>
<tr>
<th><strong>5 Firefighting measures</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>· Extinguishing media</td>
</tr>
<tr>
<td>· Suitable extinguishing agents:</td>
</tr>
<tr>
<td>CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.</td>
</tr>
<tr>
<td>· Special hazards arising from the substance or mixture No further relevant information available.</td>
</tr>
<tr>
<td>· Advice for firefighters</td>
</tr>
<tr>
<td>· Protective equipment: No special measures required.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>6 Accidental release measures</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>· Personal precautions, protective equipment and emergency procedures</td>
</tr>
<tr>
<td>Wear protective equipment. Keep unprotected persons away.</td>
</tr>
<tr>
<td>· Environmental precautions:</td>
</tr>
<tr>
<td>Dilute with plenty of water.</td>
</tr>
<tr>
<td>Do not allow to enter sewers/surface or ground water.</td>
</tr>
<tr>
<td>· Methods and material for containment and cleaning up:</td>
</tr>
<tr>
<td>Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).</td>
</tr>
<tr>
<td>Use neutralising agent.</td>
</tr>
<tr>
<td>Dispose contaminated material as waste according to item 13.</td>
</tr>
<tr>
<td>Ensure adequate ventilation.</td>
</tr>
<tr>
<td>· Reference to other sections</td>
</tr>
<tr>
<td>See Section 7 for information on safe handling.</td>
</tr>
<tr>
<td>See Section 8 for information on personal protection equipment.</td>
</tr>
<tr>
<td>See Section 13 for disposal information.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>7 Handling and storage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>· Handling:</td>
</tr>
<tr>
<td>· Precautions for safe handling</td>
</tr>
<tr>
<td>Ensure good ventilation/exhaustion at the workplace.</td>
</tr>
<tr>
<td>Prevent formation of aerosols.</td>
</tr>
<tr>
<td>· Information about fire - and explosion protection: No special measures required.</td>
</tr>
<tr>
<td>· Conditions for safe storage, including any incompatibilities</td>
</tr>
<tr>
<td>· Storage:</td>
</tr>
<tr>
<td>· Requirements to be met by storerooms and receptacles: No special requirements.</td>
</tr>
<tr>
<td>· Information about storage in one common storage facility: Not required.</td>
</tr>
<tr>
<td>· Further information about storage conditions: Keep container tightly sealed.</td>
</tr>
<tr>
<td>· Specific end use(s) No further relevant information available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>8 Exposure controls/personal protection</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>· Additional information about design of technical facilities: No further data; see item 7.</td>
</tr>
</tbody>
</table>

(Contd. on page 4)
Control parameters

Ingredients with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>CAS number</th>
<th>Chemical name</th>
<th>Limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>144-62-7</td>
<td>oxalic acid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NES</td>
<td>Short-term value: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long-term value: 1 mg/m³</td>
</tr>
</tbody>
</table>

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Tightly sealed goggles

Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
Colour: Clear
Odour: Characteristic
Odour threshold: Not determined.

pH-value at 20 °C: 0.8
### Change in condition

- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: 100 °C

### Flash point:
Not applicable.

### Flammability (solid, gaseous):
Not applicable.

### Ignition temperature:
- Decomposition temperature: Not determined.

### Self-igniting:
Product is not self-igniting.

### Danger of explosion:
Product does not present an explosion hazard.

### Explosion limits:
- Lower: Not determined.
- Upper: Not determined.

### Vapour pressure at 20 °C:
23 hPa

### Density at 20 °C:
1,04505 g/cm³

### Relative density:
Not determined.

### Vapour density:
Not determined.

### Evaporation rate:
Not determined.

### Solubility in / Miscibility with water:
Fully miscible.

### Partition coefficient (n-octanol/water):
Not determined.

### Viscosity:
- Dynamic: Not determined.
- Kinematic: Not determined.

### Solvent content:
- Organic solvents: 0.0 %
- Water: 98.0 %
- VOC (EC): 0.00 %

### Solids content:
5.0 %

### Other information
No further relevant information available.

### Stability and reactivity

#### Reactivity

#### Chemical stability

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

#### Possibility of hazardous reactions
No dangerous reactions known.

#### Conditions to avoid
No further relevant information available.

#### Incompatible materials
No further relevant information available.

#### Hazardous decomposition products
No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
- Acute toxicity
- Primary irritant effect:
  - Skin corrosion/irritation Strong caustic effect on skin and mucous membranes.
  - Serious eye damage/irritation Strong caustic effect.
- Respiratory or skin sensitisation No sensitising effects known.
- Additional toxicological information:
  The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
  Corrosive
  Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behaviour in environmental systems:
- Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  Must not reach sewage water or drainage ditch undiluted or unneutralised.
  Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packaging:
  - Recommendation: Disposal must be made according to official regulations.
  - Recommended cleansing agents: Water, if necessary together with cleansing agents.

14 Transport information

- UN-Number
- ADG, ADN, IMDG, IATA Void
### Trade name: OXALIC ACID, 2% AQUEOUS

- **UN proper shipping name**: Void
- **Transport hazard class(es)**: Void
- **Packing group**: Void
- **Environmental hazards**: No
- **Marine pollutant**: Not applicable.
- **Special precautions for user**: Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**: Not applicable.

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Australian Inventory of Chemical Substances**: All ingredients are listed.
- **Standard for the Uniform Scheduling of Medicines and Poisons**: 144-62-7 oxalic acid S6
- **GHS label elements**: The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**
  - GHS05
  - GHS07

- **Signal word**: Danger
- **Hazard-determining components of labelling**: oxalic acid
- **Hazard statements**
  - Harmful if swallowed, in contact with skin or if inhaled.
  - Causes severe skin burns and eye damage.
- **Precautionary statements**
  - Wear protective gloves / protective clothing.
  - Do not eat, drink or smoke when using this product.
  - Use only outdoors or in a well-ventilated area.
  - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Immediately call a POISON CENTER/doctor.
  - Specific treatment (see on this label).
  - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Wash contaminated clothing before reuse.

**IF SWALLOWED:** rinse mouth. Do NOT induce vomiting.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Safety Data Sheet  
acc. to OSHA HCS

1 Identification

- Product identifier
  - Trade name: OXALIC ACID, 2% AQUEOUS
  - Article number: 26693-06, 26201-06
  - Relevant identified uses of the substance or mixture and uses advised against
    No further relevant information available.

- Application of the substance / the mixture
  - Laboratory chemicals

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400  Fax: 215-412-8450
    email: sgkck@aol.com
    www.emsdiasum.com

- Information department: Product safety department

- Emergency telephone number:
  - ChemTrec 1-800-424-9300 Contract CCN7661
    1-703-527-3887

2 Hazard(s) identification

- Classification of the substance or mixture

  - GHS05 Corrosion
    Skin Corr. 1A  H314  Causes severe skin burns and eye damage.

  - GHS07
    Acute Tox. 4  H302  Harmful if swallowed.
    Acute Tox. 4  H312  Harmful in contact with skin.
    Acute Tox. 4  H332  Harmful if inhaled.

- Classification according to Directive 67/548/EEC or Directive 1999/45/EC
  - Not applicable.
  - Corrosive
    Causes severe burns.

- Information concerning particular hazards for human and environment:
  - The product has to be labeled due to the calculation procedure of international guidelines.

- Classification system:
  - The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- Label elements

- Labelling according to EU guidelines:
  - The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 2)
Safety Data Sheet
acc. to OSHA HCS

Trade name: OXALIC ACID, 2% AQUEOUS

- Code letter and hazard designation of product:
  Corrosive

- Risk phrases:
  Causes severe burns.

- Safety phrases:
  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  Wear suitable protective clothing, gloves and eyeface protection.
  In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- Hazard description:

- WHMIS-symbols:
  D2B - Toxic material causing other toxic effects
  E - Corrosive material

- Classification system:
  - NFPA ratings (scale 0 - 4)
    Health = 3
    Fire = 0
    Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    Health = 4
    Fire = 0
    Reactivity = 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  144-62-7 oxalic acid 1-5%

4 First-aid measures

- Description of first aid measures
  - General information: Immediately remove any clothing soiled by the product.
  - After inhalation: In case of unconsciousness place patient stably in side position for transportation.
41. After skin contact: Immediately wash with water and soap and rinse thoroughly.
· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
· After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
· Information for doctor:
· Most important symptoms and effects, both acute and delayed No further relevant information available.
· Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures
· Extinguishing media
· Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· Special hazards arising from the substance or mixture No further relevant information available.
· Advice for firefighters
· Protective equipment: No special measures required.

6 Accidental release measures
· Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
· Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/surface or ground water.
· Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage
· Handling:
· Precautions for safe handling
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
· Information about protection against explosions and fires: No special measures required.
· Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: No special requirements.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions: Keep receptacle tightly sealed.
· Specific end use(s) No further relevant information available.
8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

· Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>144-62-7 oxalic acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL Short-term value: 2 mg/m³</td>
</tr>
<tr>
<td>Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td>EV Short-term value: 2 mg/m³</td>
</tr>
<tr>
<td>Long-term value: 1 mg/m³</td>
</tr>
</tbody>
</table>

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes and skin.

· Breathing equipment:
  In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:

  Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:
  Form: Liquid

(Contd. of page 3)
### 10 Stability and reactivity

- **Reactivity**
  - **Chemical stability**
  - **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** No dangerous reactions known.
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:** No further relevant information available.
  - **Hazardous decomposition products:** No dangerous decomposition products known.
11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
    - on the skin: Strong caustic effect on skin and mucous membranes.
    - on the eye: Strong caustic effect.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations: Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety Health Administration)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    Water hazard class 1 (Self-assessment): slightly hazardous for water
    Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Trade name: OXALIC ACID, 2% AQUEOUS

- Uncleaned packagings:
  - **Recommendation**: Disposal must be made according to official regulations.
  - **Recommended cleansing agent**: Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
  - DOT, TDG, ADN, IMDG, IATA: Void
- **UN proper shipping name**
  - DOT, TDG, ADN, IMDG, IATA: Void
- **Transport hazard class(es)**
  - DOT, TDG, ADN, IMDG, IATA: Void
- **Packing group**
  - DOT, TDG, IMDG, IATA: Void
- **Environmental hazards**
  - Marine pollutant: No
- **Special precautions for user**
  - Not applicable
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.
- **UN "Model Regulation":** -

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances)**:
      - None of the ingredients is listed.
    - **Section 313 (specific toxic chemical listings)**:
      - None of the ingredients is listed.
    - **TSCA (Toxic Substances Control Act)**:
      - All ingredients are listed.
    - **Proposition 65**
      - **Chemicals known to cause cancer**:
        - None of the ingredients is listed.
      - **Chemicals known to cause reproductive toxicity for females**:
        - None of the ingredients is listed.
      - **Chemicals known to cause reproductive toxicity for males**:
        - None of the ingredients is listed.
      - **Chemicals known to cause developmental toxicity**:
        - None of the ingredients is listed.
Carcinogenic categories

- **EPA (Environmental Protection Agency)**
  None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**
  None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

Canadian substance listings:

- **Canadian Domestic Substances List (DSL)**
  All ingredients are listed.

- **Canadian Ingredient Disclosure list (limit 0.1%)**
  144-62-7 oxalic acid

- **Canadian Ingredient Disclosure list (limit 1%)**
  None of the ingredients is listed.

Product related hazard informations:
The product has been classified and marked in accordance with directives on hazardous materials.

- **Hazard symbols:**
  Corrosive

- **Risk phrases:**
  Causes severe burns.

- **Safety phrases:**
  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  Wear suitable protective clothing, gloves and eye/face protection.
  In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  This material and its container must be disposed of as hazardous waste.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 07/11/2015 / -

- **Abbreviations and acronyms:**
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  WHMIS: Workplace Hazardous Materials Information System (Canada)
  Acute Tox. 4: Acute toxicity, Hazard Category 4
  Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

- Trade name: OXALIC ACID, 2% AQUEOUS
- Article number: 26693-06, 26201-06

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

No further relevant information available.

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier:
  Electron Microscopy Sciences
  1560 Industry Road
  USA-Hatfield, PA 19440
  Tel: 215-412-8400  Fax: 215-412-8450
  email: sgkck@aol.com
  www.emsdiasum.com

- Further information obtainable from: Product safety department

1.4 Emergency telephone number:

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS05 corrosion

Skin Corr. 1A  H314  Causes severe skin burns and eye damage.

GHS07

Acute Tox. 4  H302  Harmful if swallowed.
Acute Tox. 4  H312  Harmful in contact with skin.

H332  Harmful if inhaled.

2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008
  The product is classified and labelled according to the CLP regulation.

- Hazard pictograms

GHS05  GHS07

- Signal word Danger

- Hazard-determining components of labelling:
  oxalic acid

- Hazard statements
  H302+H312+H332  Harmful if swallowed, in contact with skin or if inhaled.
  H314  Causes severe skin burns and eye damage.
Precautionary statements

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures

- Description: Mixture of substances listed below with nonhazardous additions.
- Dangerous components:

<table>
<thead>
<tr>
<th>CAS: 144-62-7 oxalic acid</th>
<th>Acute Tox. 4, H302; Acute Tox. 4, H312</th>
<th>≤ 2.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 205-634-3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture No further relevant information available.

5.3 Advice for firefighters

- Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
  
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.

- **Information about fire - and explosion protection:** No special measures required.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**
  
  - Requirements to be met by storerooms and receptacles: No special requirements.
  
  - Information about storage in one common storage facility: Not required.

- **Further information about storage conditions:** Keep container tightly sealed.

- **7.3 Specific end use(s)**
  
  No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Short-term value</th>
<th>Long-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>144-62-7 oxalic acid</td>
<td>2 mg/m³</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

  - General protective and hygienic measures:

    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the eyes and skin.

- **Respiratory protection:**

  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Trade name: OXALIC ACID, 2% AQUEOUS

- Protection of hands:

  Protective gloves

  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves

  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material

  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:

  Tightly sealed goggles

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SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties

  - General Information
    - Appearance:
      - Form: Liquid
      - Colour: Clear
    - Odour: Characteristic
    - Odour threshold: Not determined.
  - pH-value at 20 °C: 0.8
  - Change in condition
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: 100 °C
  - Flash point: Not applicable.
  - Flammability (solid, gaseous): Not applicable.
  - Ignition temperature:
    - Decomposition temperature: Not determined.
    - Self-igniting: Product is not selfigniting.
    - Danger of explosion: Product does not present an explosion hazard.
  - Explosion limits:
    - Lower: Not determined.
    - Upper: Not determined.
  - Vapour pressure at 20 °C: 23 hPa
  - Density at 20 °C: 1.04505 g/cm³
Trade name: OXALIC ACID, 2% AQUEOUS

- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with water: Fully miscible.
- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Solvent content:
  - Organic solvents: 0.0 %
  - Water: 98.0 %
  - VOC (EC): 0.00 %
- Solids content: 5.0 %
- 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
- 10.2 Chemical stability
- 10.3 Possibility of hazardous reactions: No dangerous reactions known.
- 10.4 Conditions to avoid: No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

- 11.1 Information on toxicological effects
- 11.2 Acute toxicity
- 11.3 Primary irritant effect:
- 11.4 Skin corrosion/irritation: Strong caustic effect on skin and mucous membranes.
- 11.5 Serious eye damage/irritation: Strong caustic effect.
- 11.6 Respiratory or skin sensitisation: No sensitising effects known.
- Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
- Corrosive
- Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

SECTION 12: Ecological information

- 12.1 Toxicity
- 12.2 Aquatic toxicity: No further relevant information available.
- 12.3 Persistence and degradability: No further relevant information available.
- 12.4 Bioaccumulative potential: No further relevant information available.
**Trade name: OXALIC ACID, 2% AQUEOUS**

- **Additional ecological information:**
- **General notes:**
  Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  Must not reach sewage water or drainage ditch undiluted or unneutralised.
  Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- **12.5 Results of PBT and vPvB assessment**
  - PBT: Not applicable.
  - vPvB: Not applicable.

- **12.6 Other adverse effects**
  No further relevant information available.

---

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
  - Recommendation
    Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**
  - Recommendation: Disposal must be made according to official regulations.
  - Recommended cleansing agents: Water, if necessary together with cleansing agents.

---

**SECTION 14: Transport information**

- **14.1 UN-Number**
  - ADR, ADN, IMDG, IATA: Void

- **14.2 UN proper shipping name**
  - ADR, ADN, IMDG, IATA: Void

- **14.3 Transport hazard class(es)**
  - ADR, ADN, IMDG, IATA: Void

- **14.4 Packing group**
  - ADR, IMDG, IATA: Void

- **14.5 Environmental hazards:**
  - Marine pollutant: No

- **14.6 Special precautions for user**
  Not applicable.

- **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  Not applicable.

- **UN "Model Regulation":**
  -

---

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
  - H302 Harmful if swallowed.
  - H312 Harmful in contact with skin.

- **Abbreviations and acronyms:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
**RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming**

- **1.1 Productidentificatie**
- **Handelsnaam:** OXALIC ACID, 2% AQUEOUS
- **Artikelnummer:** 26693-06, 26201-06
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
  Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemcaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
  - **Fabrikant/leverancier:** Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400  Fax: 215-412-8450
    email: sgkck@aol.com
    www.emsdiasum.com
  - **Inlichtingengevende sector:** Product safety department
  - **1.4 Telefoonnummer voor noodgevallen:**
    ChemTrec 1-800-424-9300 Contract CCN7661
    1-703-527-3887

**RUBRIEK 2: Identificatie van de gevaren**

- **2.1 Indeling van de stof of het mengsel**
  - **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**
  
  - **GHS05 corrosie**
    Skin Corr. 1A  H314  Veroorzaakt ernstige brandwonden en oogletsel.
  
  - **GHS07**
    Acute Tox. 4  H302  Schadelijk bij inslikken.
    Acute Tox. 4  H312  Schadelijk bij contact met de huid.
    Acute Tox. 4  H332  Schadelijk bij inademing.

- **2.2 Etiketteringselementen**
  - **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
    Het product is geclasseerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)
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Handelsnaam: OXALIC ACID, 2% AQUEOUS

- Gevarenpictogrammen
  ![GHS05](image1) ![GHS07](image2)

- Signaalwoord: Gevaar

- Gevaaraanduidende componenten voor de etikettering:
  oxaalzuur

- Gevaaraanduidingen
  H302+H312+H332 Schadelijk bij inslikken, bij contact met de huid en bij inademing.
  H314 Veroorzaakt ernstige brandwonden en oogletsel.

- Veiligheidsaanbevelingen
  P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.
  P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.
  P321 Specifieke behandeling vereist (zie op dit etiket).
  P405 Achter slot bewaren.
  P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

- 2.3 Andere gevaren
- Resultaten van PBT- en zPzB-beoordeling
  - PBT: Niet bruikbaar.
  - zPzB: Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

- 3.2 Chemische karakterisering: Mengsels
- Beschrijving: Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

- Gevaarlijke inhoudstoffen:
  CAS: 144-62-7 oxaalzuur
  Acute Tox. 4, H302; Acute Tox. 4, H312

- Aanvullende gegevens:
  De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

RUBRIEK 4: Eerstehulpmaatregelen

- 4.1 Beschrijving van de eerstehulpmaatregelen
- Algemene informatie: Verontreinigde kleding onmiddellijk uittrekken.
  - Na het inademen: Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
  - Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.
  - Na oogcontact: Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
  - Na inslikken: Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.
- 4.2 Belangrijkste acute en uitgestelde symptomen en effecten: Geen verdere relevante informatie verkrijgbaar.
- 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling: Geen verdere relevante informatie verkrijgbaar.
RUBRIEK 5: Brandbestrijdingsmaatregelen

- 5.1 Blusmiddelen
- Geschikte blusmiddelen:
  CO2, bluspoeder of waterstraal. Grote brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.
- 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt
  Geen verdere relevante informatie verkrijgbaar.
- 5.3 Advies voor brandweerlieden
  Speciale beschermende kleding: Geen bijzondere maatregelen nodig.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures
  Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.
- 6.2 Milieuvoorzorgsmaatregelen:
  Met veel water verdunnen.
  Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- 6.3 Insluitings- en reinigingsmethoden en -materiaal:
  Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
  Neutralisatiemiddel gebruiken.
  Besmet materiaal zoals afval volgens punt 13 verwijderen.
  Voor voldoende ventilatie zorgen.
- 6.4 Verwijzing naar andere rubrieken
  Informatie inzake veilig gebruik - zie hoofdstuk 7.
  Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.
  Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

- 7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel
  Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.
  Aërosolvorming vermijden.
- Informatie m.b.t. brand- en ontploffingsgevaar: Geen bijzondere maatregelen noodzakelijk.
- 7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten
- Opslag:
  - Eisen ten opzichte van opslagruimte en tanks: Geen bijzondere eisen.
  - Informatie m.b.t. gezamenlijke opslag: Niet noodzakelijk.
  - Verdere inlichtingen over eisen m.b.t. de opslag: Tanks ondoorzichtbaar gesloten houden.
- 7.3 Specifiek eindgebruik
  Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- Aanvullende gegevens m.b.t. de inrichting van technische installaties: Geen aanvullende gegevens. Zie 7.
- 8.1 Controleparameters
- Bestanddelen met grenswaarden die m.b.t. de werkruijnte in acht genomen moeten worden:
  144-62-7 oxaalzuur
  WGW Lange termijn waarde: 1 mg/m³
- Aanvullende gegevens: Als basis dienden lijsten die bij opstelling geldig waren.
8.2 Maatregelen ter beheersing van blootstelling

Persoonlijke beschermingsvoorzieningen:

Algemene beschermings- en gezondheidsmaatregelen:
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Aanraking met de ogen en de huid vermijden.

Ademhalingsbescherming:
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

Handbescherming:

Veiligheidshandschoenen


Handschoenmateriaal
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

Doordringingstijd van het handschoenmateriaal
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

Oogbescherming:

Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

9.1 Informatie over fysische en chemische basiseigenschappen

Algemene gegevens

Voorkomen:
Vorm: Vloeistof
Kleur: Helder
Reuk: Karakteristiek
Geurdrempelwaarde: Niet bepaald.

pH-waarde bij 20 ºC: 0,8

Toestandsverandering
Smeltpunt/smeltbereik: Niet bepaald.
Kookpunt/kookpuntbereik: 100 ºC

Vlampunt: Niet bruikbaar.

Ontvlambaarheid (vast, gasvormig): Niet bruikbaar.
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- Ontstekingstemperatuur:
  Ontbindingstemperatuur: Niet bepaald.
- Zelfontsteking:
  Het produkt ontbrandt niet uit zichzelf.
- Ontploffingsgevaar:
  Het produkt is niet ontploffingsgevaarlijk.
- Ontploffingsgrenzen:
  Onderste: Niet bepaald.
  Bovenste: Niet bepaald.
- Dampspanning bij 20 °C:
  23 hPa
- Dichtheid bij 20 °C:
  1,04505 g/cm³
- Relatieve dichtheid
  Niet bepaald.
- Dampdichtheid
  Niet bepaald.
- Verdelingscoëfficiënt (n-octanol/water): Niet bepaald.
- Viscositeit
  Dynamisch: Niet bepaald.
  Kinematisch: Niet bepaald.
- Oplosbaarheid in/mengbaarheid met Water:
  Volledig mengbaar.
- Verdelingscoëfficiënt (n-octanol/water): Niet bepaald.
- Organisch oplosmiddel: 0,0 %
- Water: 98,0 %
- VOC (EG): 0,00 %
- Gehalte aan vaste bestanddelen: 5,0 %
- 9.2 Overige informatie
  Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

10.1 Reactiviteit
10.2 Chemische stabilité
10.3 Mogelijke gevaarlijke reacties
10.4 Te vermijden omstandigheden
10.5 Chemisch op elkaar inwerkende materialen
10.6 Gevaarlijke ontedingsproducten

RUBRIEK 11: Toxicologische informatie

11.1 Informatie over toxicologische effecten
11.2 Acute toxiciteit
11.3 Primaire aandoening:
  Huidcorrosie/irritatie Sterk bijtend effect op de huid en de slijmvlies.
  Ernstig oogletsel/oorirritatie Sterk bijtend effect.
  Sensibilisatie van de luchtwegen/de huid Geen effect van overgevoeligheid bekend.
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Aanvullende toxicologische informatie:
Het produkt vertoont op grond van het berekeningsprocédé van de algemene classificatie-richtlijnen van de EG voor toebereidingen in de laatste geldige redactie de volgende gevaren:

Bijtend
Bij het slikken sterk bijtende effecten in de mondholte en de keel, bovendien gevaar voor perforatie van de slokdarm en de maag.

RUBRIEK 12: Ecologische informatie

12.1 Toxiciteit
- Aquatische toxiciteit: Geen verdere relevante informatie verkrijgbaar.
- Persistentie en afbreekbaarheid: Geen verdere relevante informatie verkrijgbaar.
- Bioaccumulatie: Geen verdere relevante informatie verkrijgbaar.
- Mobiliteit in de bodem: Geen verdere relevante informatie verkrijgbaar.
- Verdere ecologische informatie:
  - Algemene informatie:
    Waterbezwaarlijkheid (NL) 11: Weinig schadelijk voor water levende organismen.
    Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein
    Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
    Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.
- 12.5 Resultaten van PBT- en zPzB-beoordeling
  - PBT: Niet bruikbaar.
  - zPzB: Niet bruikbaar.
- 12.6 Andere schadelijke effecten: Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

13.1 Afvalverwerkingsmethoden
- Aanbeveling: Mag niet samen met huisvuil gestort worden of in de riolering terechtkomen.
- Niet gereinigde verpakkingen:
  - Aanbeveling: Afvalverwijdering volgens overheidsbepalingen.
  - Aanbevolen reinigingsmiddel: Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

14.1 VN-nummer
- ADR, ADN, IMDG, IATA: Niet van toepassing

14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN
- ADR, ADN, IMDG, IATA: Niet van toepassing

14.3 Transportgevarenklasse(n)
- ADR, ADN, IMDG, IATA: klasse Niet van toepassing
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- **14.4 Verpakkingsgroep:**
  - ADR, IMDG, IATA: Niet van toepassing

- **14.5 Milieueigenen:**
  - Marine pollutant: Neen

- **14.6 Bijzondere voorzorgen voor de gebruiker:**
  - Niet bruikbaar.

- **14.7 Vervoer in bulk overeenkomstig bijlage II bij MARPOL 73/78 en de IBC-code:**
  - Niet bruikbaar.

- **VN "Model Regulation":**
  - -

RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel:**
  - **SZW-lijst van kankerverwekkende stoffen:**
    - geen der bestanddelen staat op de lijst.
  - **SZW-lijst van mutagene stoffen:**
    - geen der bestanddelen staat op de lijst.
  - **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid:**
    - geen der bestanddelen staat op de lijst.
  - **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling:**
    - geen der bestanddelen staat op de lijst.
  - **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding:**
    - geen der bestanddelen staat op de lijst.

- **Richtlijn 2012/18/EU**: Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I: geen der bestanddelen staat op de lijst.

- **Nationale voorschriften:**
  - **Gevaarklasse v. water: Waterbezwaarlijkheid (NL) 11: Saneringsinspanning B**
  - **Nationale voorschriften:**
    - **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van producteigenschappen en vestigen geen contractuele rechtsbetrekking.

- **Relevante zinnen:**
  - H302 Schadelijk bij inslikken.
  - H312 Schadelijk bij contact met de huid.

- **Afkortingen en acroniemen:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

N.B.
SECTION 1: Identification de la substance/du mélange et de la société/l'entreprise

1.1 Identificateur de produit
· Nom du produit: OXALIC ACID, 2% AQUEOUS
· Code du produit: 26693-06, 26201-06

1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées
Pas d'autres informations importantes disponibles.

1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité
· Producteur/fournisseur: Electron Microscopy Sciences
  1560 Industry Road
  USA-Hatfield, PA 19440
  Tel: 215-412-8400  Fax: 215-412-8450
  email: sgkck@aol.com
  www.emsdiasum.com
· Service chargé des renseignements: Product safety department
· 1.4 Numéro d’appel d’urgence:
  ChemTrec 1-800-424-9300 Contract CCN7661
  1-703-527-3887

SECTION 2: Identification des dangers

2.1 Classification de la substance ou du mélange
· Classification selon le règlement (CE) n° 1272/2008

GHS05 corrosion
Skin Corr. 1A  H314  Provoque des brûlures de la peau et des lésions oculaires graves.

GHS07
Acute Tox. 4  H302  Nocif en cas d'ingestion.
Acute Tox. 4  H312  Nocif par contact cutané.
Acute Tox. 4  H332  Nocif par inhalation.

2.2 Éléments d’étiquetage
· Étiquetage selon le règlement (CE) n° 1272/2008 Le produit est classifié et étiqueté selon le règlement CLP.
· Pictogrammes de danger

GHS05  GHS07

· Mention d'avertissement Danger
· Composants dangereux déterminants pour l’étiquetage:
  acide oxalique
· Mentions de danger
  H302+H312+H332  Nocif en cas d’ingestion, de contact cutané ou d’inhalation.
  H314  Provoque des brûlures de la peau et des lésions oculaires graves.
Nom du produit: OXALIC ACID, 2% AQUEOUS

**Conseils de prudence**

- **P303+P361+P353** EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.
- **P305+P351+P338** EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
- **P310** Appeler immédiatement un CENTRE ANTIPOISON/un médecin.
- **P321** Traitement spécifique (voir sur cette étiquette).
- **P405** Garder sous clef.
- **P501** Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

**2.3 Autres dangers**

- **Résultats des évaluations PBT et vPvB**
  - **PBT:** Non applicable.
  - **vPvB:** Non applicable.

**SECTION 3: Composition/informations sur les composants**

- **3.2 Caractérisation chimique: Mélange**

  - **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

  - **Composants dangereux:**
    - CAS: 144-62-7
    - EINECS: 205-634-3
    - acide oxalique
    - Acute Tox. 4, H302; Acute Tox. 4, H312
    - ≤ 2,5%

- **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

**SECTION 4: Premiers secours**

- **4.1 Description des premiers secours**

  - **Remarques générales:** Enlever immédiatement les vêtements contaminés par le produit.
  - **Après inhalation:** En cas d'inconscience, coucher et transporter la personne en position latérale stable.
  - **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.
  - **Après contact avec les yeux:**
    - Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.
  - **Après ingestion:** Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.
  - **4.2 Principaux symptômes et effets, aigus et différés**
    - Pas d'autres informations importantes disponibles.
  - **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**
    - Pas d'autres informations importantes disponibles.

**SECTION 5: Mesures de lutte contre l'incendie**

- **5.1 Moyens d'extinction**

  - **Moyens d'extinction:**
    - CO2, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
  - **5.2 Dangers particuliers résultant de la substance ou du mélange**
    - Pas d'autres informations importantes disponibles.
SECTION 6: Mesures à prendre en cas de dispersion accidentelle

- 6.1 Précautions individuelles, équipement de protection et procédures d'urgence
  Porter un équipement de sécurité. Éloigner les personnes non protégées.
- 6.2 Précautions pour la protection de l'environnement:
  Diluer avec beaucoup d'eau.
  Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- 6.3 Méthodes et matériel de confinement et de nettoyage:
  Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).
  Utiliser un neutralisant.
  Évacuer les matériaux contaminés en tant que déchets conformément au point 13.
  Assurer une aération suffisante.
- 6.4 Référence à d'autres sections
  Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.
  Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.
  Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

SECTION 7: Manipulation et stockage

- 7.1 Précautions à prendre pour une manipulation sans danger
  Veiller à une bonne ventilation/aspiration du poste de travail.
  Éviter la formation d'aérosols.
- Préventions des incendies et des explosions: Aucune mesure particulière n'est requise.
- 7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités
  Stockage:
  - Exigences concernant les lieux et conteneurs de stockage: Aucune exigence particulière.
  - Indications concernant le stockage commun: Pas nécessaire.
  - Autres indications sur les conditions de stockage: Tenir les emballages hermétiquement fermés.
- 7.3 Utilisation(s) finale(s) particulière(s) Pas d'autres informations importantes disponibles.

SECTION 8: Contrôles de l'exposition/protection individuelle

- Indications complémentaires pour l'agencement des installations techniques:
  Sans autre indication, voir point 7.
- 8.1 Paramètres de contrôle
  - Composants présentant des valeurs-seuil à surveiller par poste de travail:
    144-62-7 acide oxalique
    VME Valeur à long terme: 1 mg/m³
- Remarques supplémentaires:
  Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- 8.2 Contrôles de l'exposition
  - Equipement de protection individuel:
  - Mesures générales de protection et d'hygiène:
    Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
    Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail. Eviter tout contact avec les yeux et avec la peau.

- Protection respiratoire:
  En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l’air ambiant.

- Protection des mains:

  Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation. A cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée. Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

- Matériaux des gants
  Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

- Temps de pénétration du matériau des gants
  Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

- Protection des yeux:

  Lunettes de protection hermétiques

**SECTION 9: Propriétés physiques et chimiques**

- 9.1 Informations sur les propriétés physiques et chimiques essentielles
  - Indications générales
    - Aspect:
      - Forme: Liquide
      - Couleur: Transparent
    - Odeur: Caractéristique
    - Seuil olfactif: Non déterminé.

    - valeur du pH à 20 °C: 0,8

    - Changement d’état
      - Point de fusion: Non déterminé.
      - Point d’ébullition: 100 °C

    - Point d’éclair: Non applicable.

    - Inflammabilité (solide, gazeux): Non applicable.

    - Température d’inflammation:
      - Température de décomposition: Non déterminé.

    - Auto-inflammation: Le produit ne s’enflamme pas spontanément.

    - Danger d'explosion: Le produit n’est pas explosif.
### Fiche de données de sécurité
selon 1907/2006/CE, Article 31

**Nom du produit:** OXALIC ACID, 2% AQUEOUS

#### SECTION 10: Stabilité et réactivité

- **10.1 Réactivité**
- **10.2 Stabilité chimique**
  - Décomposition thermique/conditions à éviter: Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

#### SECTION 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
  - Toxicité aiguë
  - Effet primaire d’irritation:
  - Corrosion cutanée/Irritation cutanée Effet fortement corrosif sur la peau et les muqueuses.
  - Lésions oculaires graves/Irritation oculaire Effet fortement corrosif.
  - Sensibilisation respiratoire ou cutanée Aucun effet de sensibilisation connu.
  - Indications toxicologiques complémentaires:
    Selon le procédé de calcul de la dernière version en vigueur de la directive générale CEE sur la classification des préparations, le produit présente les dangers suivants:
    - Corrosif
    - L’absorption orale du produit a un fort effet corrosif sur la cavité buccale et le pharynx et présente un danger de perforation du tube digestif et de l’estomac.

---

### Limites d'explosion:

- Inférieure: Non déterminé.
- Supérieure: Non déterminé.

### Pression de vapeur à 20 °C:

- 23 hPa

### Densité à 20 °C:

- 1,04505 g/cm³

### Solubilité dans/miscibilité avec l'eau:

- Entièrement miscible

### Viscosité:

- Dynamique: Non déterminé.
- Cinématique: Non déterminé.

### Teneur en solvants:

- Solvants organiques: 0,0 %
- Eau: 98,0 %
- VOC (CE) 0,00 %

### Teneur en substances solides:

- 5,0 %

### 9.2 Autres informations

Pas d'autres informations importantes disponibles.
**SECTION 12: Informations écologiques**

- **12.1 Toxicité**
  - Toxicité aquatique: Pas d'autres informations importantes disponibles.

- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.

- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.

- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

- **Autres indications écologiques:**
  - Indications générales:
    Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant
    Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
    Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.
    Jeter de plus grandes quantités dans la canalisation ou les eaux peut mener à une baisse de la valeur du pH. Une valeur du pH basse est nocive pour les organismes aquatiques. Dans la dilution de la concentration utilisée, la valeur du pH augmente considérablement: après l'utilisation du produit, les eaux résiduaires arrivant dans la canalisation ne sont que faiblement polluantes pour l'eau.

- **12.5 Résultats des évaluations PBT et VPVB**
  - PBT: Non applicable.
  - vPvB: Non applicable.

- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

**SECTION 13: Considérations relatives à l’élimination**

- **13.1 Méthodes de traitement des déchets**
  - Recommandation: Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.

- **Emballages non nettoyés:**
  - Recommandation: Evacuation conformément aux prescriptions légales.
  - Produit de nettoyage recommandé: Eau, éventuellement avec des produits de nettoyage

**SECTION 14: Informations relatives au transport**

- **14.1 No ONU**
  - ADR, ADN, IMDG, IATA  néant

- **14.2 Nom d'expédition des Nations unies**
  - ADR, ADN, IMDG, IATA  néant

- **14.3 Classe(s) de danger pour le transport**
  - ADR, ADN, IMDG, IATA  néant
  - Classe néant

- **14.4 Groupe d'emballage**
  - ADR, IMDG, IATA  néant

- **14.5 Dangers pour l'environnement:**
  - Marine Pollutant: Non

- **14.6 Précautions particulières à prendre par l'utilisateur**
  - Non applicable.
Nom du produit: OXALIC ACID, 2% AQUEOUS

SECTION 15: Informations réglementaires

15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d’environnement
- Directive 2012/18/UE
- Substances dangereuses désignées - ANNEXE I Aucun des composants n’est compris.
- 15.2 Évaluation de la sécurité chimique: Une évaluation de la sécurité chimique n’a pas été réalisée.

SECTION 16: Autres informations

Ces indications sont fondées sur l’état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

- Phrases importantes
  H302 Nocif en cas d’ingestion.
  H312 Nocif par contact cutané.

- Acronymes et abréviations:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  VOC: Volatile Organic Compounds (USA, EU)
  Acute Tox. 4: Acute toxicity, Hazard Category 4
  Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
ABSCHNITT 1: Bezeichnung des Stoffs bzw. des Gemischs und des Unternehmens

· 1.1 Produktidentifikator

| Handelsname: | OXALIC ACID, 2% AQUEOUS |
| Article number: | 26693-06, 26201-06 |

· 1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird

Keine weiteren relevanten Informationen verfügbar.

· Verwendung des Stoffes / des Gemisches

Laborchemikalien

· 1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt

Hersteller/Lieferant:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkck@aol.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany
Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

24h Giftnotruf München: +49 (0)89 19240
Toxikologische Abteilung der II. Medizinischen Klinik
rechts der Isar, München. - www.toxinfo.org

· Auskunftgebender Bereich: Product safety department

· 1.4 Notrufnummer:

ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

· 2.1 Einstufung des Stoffs oder Gemischs

Einstufung gemäß Verordnung (EG) Nr. 1272/2008

GHS05 Ätzwirkung

Skin Corr. 1A H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.
Acute Tox. 4 H312 Gesundheitsschädlich bei Hautkontakt.
Acute Tox. 4 H332 Gesundheitsschädlich bei Einatmen.

· 2.2 Kennzeichnungselemente

Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

(Fortsetzung auf Seite 2)
Handelsname: OXALIC ACID, 2% AQUEOUS

- Gefahrenpiktogramme

GHS05  Gefahr
GHS07

- Signalwort Gefahr

- Gefahrbestimmende Komponenten zur Etikettierung:
  Oxalsäure

- Gefahrenhinweise
  H302+H312+H332 Gesundheitsschädlich bei Verschlucken, Hautkontakt oder Einatmen.
  H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

- Sicherheitshinweise
  P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.
  P405 Unter Verschluss aufbewahren.

- 2.3 Sonstige Gefahren
  - Ergebnisse der PBT- und vPvB-Beurteilung
    - PBT: Nicht anwendbar.
    - vPvB: Nicht anwendbar.

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- 3.2 Chemische Charakterisierung: Gemische
  - Beschreibung: Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

- Gefährliche Inhaltsstoffe:

<table>
<thead>
<tr>
<th>CAS: 144-62-7</th>
<th>Oxalsäure</th>
<th>Acute Tox. 4, H302; Acute Tox. 4, H312</th>
<th>≤ 2,5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EINECS: 205-634-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Zusätzliche Hinweise: Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- 4.1 Beschreibung der Erste-Hilfe-Maßnahmen
  - Allgemeine Hinweise: Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
  - Nach Einatmen: Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.
  - Nach Hautkontakt: Sofort mit Wasser und Seife abwaschen und gut nachspülen.

- 4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen
  Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 3)
ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- 5.1 Löschmittel
  - Geeignete Löschmittel:

- 5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren
  Keine weiteren relevanten Informationen verfügbar.

- 5.3 Hinweise für die Brandbekämpfung
  - Besondere Schutzausrüstung: Keine besonderen Maßnahmen erforderlich.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- 6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren
  Schutzausrüstung tragen. Ungeschützte Personen fernhalten.

- 6.2 Umweltschutzmaßnahmen:
  Mit viel Wasser verdünnen. Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

- 6.3 Methoden und Material für Rückhaltung und Reinigung:
  Mit flüssigkeitsbindendem Material (Sand, Kieselsand, Säurebinder, Universalbinder, Sägemehl) aufnehmen.
  Neutralisationsmittel anwenden.
  Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
  Für ausreichende Lüftung sorgen.

- 6.4 Verweis auf andere Abschnitte
  Informationen zur sicheren Handhabung siehe Abschnitt 7.
  Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.
  Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

- 7.1 Schutzmaßnahmen zur sicheren Handhabung
  Für gute Belüftung/Absaugung am Arbeitsplatz sorgen. Aerosolbildung vermeiden.
  - Hinweise zum Brand- und Explosionsschutz: Keine besonderen Maßnahmen erforderlich.

- 7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten
  - Lagerung:
    - Anforderung an Lagerräume und Behälter: Keine besonderen Anforderungen.
    - Zusammenlagerungshinweise: Nicht erforderlich.
  - Weitere Angaben zu den Lagerbedingungen: Behälter dicht geschlossen halten.
  - Lagerklasse:
    - Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):
      - 7.3 Spezifische Endanwendungen Keine weiteren relevanten Informationen verfügbar.
Handelsname: OXALIC ACID, 2% AQUEOUS

(Fortsetzung von Seite 3)

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

· Zusätzliche Hinweise zur Gestaltung technischer Anlagen: Keine weiteren Angaben, siehe Abschnitt 7.

8.1 Zu überwachende Parameter

· Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:

<table>
<thead>
<tr>
<th>144-62-7 Oxalsäure</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGW Langzeitwert: 1 E mg/m³</td>
</tr>
<tr>
<td>1(I);H, EU, 13</td>
</tr>
</tbody>
</table>

· Zusätzliche Hinweise: Als Grundlage dienten die bei der Erstellung gültigen Listen.

8.2 Begrenzung und Überwachung der Exposition

· Persönliche Schutzausrüstung:

   Allgemeine Schutz- und Hygienemaßnahmen:
   - Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
   - Beschmutzte, getränkte Kleidung sofort ausziehen.
   - Vor den Pausen und bei Arbeitsende Hände waschen.
   - Berührung mit den Augen und der Haut vermeiden.

   · Atemschutz:
     Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition umlufthunabhängiges Atemschutzgerät verwenden.

   · Handschutz:
     Schutzhandschuhe

   · Handschuhmaterial
     Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

   · Durchdringungszeit des Handschuhmaterials
     Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

   · Augenschutz:
     Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften
· Allgemeine Angaben
· Aussehen:
  Form: Flüssigkeit

(Fortsetzung auf Seite 5)
Handelsname: OXALIC ACID, 2% AQUEOUS

<table>
<thead>
<tr>
<th>Eigenschaft</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farbe</td>
<td>Klar</td>
</tr>
<tr>
<td>Geruch</td>
<td>Charakteristisch</td>
</tr>
<tr>
<td>Geruchsschwelle</td>
<td>Nicht bestimmt.</td>
</tr>
<tr>
<td>pH-Wert bei 20 °C</td>
<td>0,8</td>
</tr>
<tr>
<td>Zustandsänderung</td>
<td>Schmelzpunkt/Schmelzbereich: Nicht bestimmt.</td>
</tr>
<tr>
<td></td>
<td>Siedepunkt/Siedebereich:</td>
</tr>
<tr>
<td>Flammkernheit:fest, gasförmig:</td>
<td>Nicht anwendbar.</td>
</tr>
<tr>
<td>Zündtemperatur:</td>
<td>Zersetzungstemperatur: Nicht bestimmt.</td>
</tr>
<tr>
<td>Selbstzündlichkeit:</td>
<td>Das Produkt ist nicht selbstzündlich.</td>
</tr>
<tr>
<td>Explosionsgefahr:</td>
<td>Das Produkt ist nicht explosionsgefährlich.</td>
</tr>
<tr>
<td>Explosionsgrenzen:</td>
<td>Untere: Nicht bestimmt.</td>
</tr>
<tr>
<td></td>
<td>Obere: Nicht bestimmt.</td>
</tr>
<tr>
<td>Dampfdruck bei 20 °C:</td>
<td>23 hPa</td>
</tr>
<tr>
<td>Dichte bei 20 °C:</td>
<td>1,04505 g/cm³</td>
</tr>
<tr>
<td>Relative Dichte</td>
<td>Nicht bestimmt.</td>
</tr>
<tr>
<td>Dampfdichte</td>
<td>Nicht bestimmt.</td>
</tr>
<tr>
<td>Verdampfungsgeschwindigkeit:</td>
<td>Nicht bestimmt.</td>
</tr>
<tr>
<td>Löslichkeit in / Mischbarkeit mit Wasser:</td>
<td>Vollständig mischbar.</td>
</tr>
<tr>
<td>Verteilungskoeffizient (n-Octanol/Wasser):</td>
<td>Nicht bestimmt.</td>
</tr>
<tr>
<td>Viskosität:</td>
<td>Dynamisch: Nicht bestimmt.</td>
</tr>
<tr>
<td>Kinematisch:</td>
<td>Nicht bestimmt.</td>
</tr>
<tr>
<td>Lösungsmittelgehalt:</td>
<td>Organische Lösungsmittel: 0,0 %</td>
</tr>
<tr>
<td>Wasser:</td>
<td>98,0 %</td>
</tr>
<tr>
<td>VOC (EU):</td>
<td>0,00 %</td>
</tr>
<tr>
<td>Festkörpergehalt:</td>
<td>5,0 %</td>
</tr>
<tr>
<td>9.2 Sonstige Angaben:</td>
<td>Keine weiteren relevanten Informationen verfügbar.</td>
</tr>
</tbody>
</table>

ABSCHNITT 10: Stabilität und Reaktivität

- 10.1 Reaktivität
- 10.2 Chemische Stabilität
- Thermische Zersetzung / zu vermeidende Bedingungen:
  Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- 10.3 Möglichkeit gefährlicher Reaktionen: Keine gefährlichen Reaktionen bekannt.
- 10.4 Zu vermeidende Bedingungen: Keine weiteren relevanten Informationen verfügbar.
- 10.5 Unverträgliche Materialien: Keine weiteren relevanten Informationen verfügbar.
Handelsname: OXALIC ACID, 2% AQUEOUS

10.6 Gefährliche Zersetzungsprodukte: Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

11.1 Angaben zu toxikologischen Wirkungen
- Akute Toxizität
- Primäre Reizwirkung:
  - Ätz-/Reizwirkung auf die Haut: Starke Ätzwirkung auf Haut und Schleimhäute.
  - Schwere Augenschädigung/-reizung: Starke Ätzwirkung.
- Sensibilisierung der Atemwege/Haut: Keine sensibilisierende Wirkung bekannt.
- Zusätzliche toxikologische Hinweise:
  Das Produkt weist aufgrund des Berechnungsverfahrens der Allgemeinen Einstufungsrichtlinie der EG für Zubereitungen in der letztgültigen Fassung folgende Gefahren auf:
  - Ätzend
  Bei Verschlucken starke Ätzwirkung des Mundraumes und Rachens sowie Gefahr der Perforation der Speiseröhre und des Magens.

ABSCHNITT 12: Umweltbezogene Angaben

12.1 Toxizität
- Aquatische Toxizität: Keine weiteren relevanten Informationen verfügbar.
- 12.2 Persistenz und Abbaubarkeit: Keine weiteren relevanten Informationen verfügbar.
- 12.3 Bioakkumulationspotenzial: Keine weiteren relevanten Informationen verfügbar.
- 12.4 Mobilität im Boden: Keine weiteren relevanten Informationen verfügbar.
- Weitere ökologische Hinweise:
  - Allgemeine Hinweise:
    Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend
    Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
    Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.
- 12.5 Ergebnisse der PBT- und vPvB-Beurteilung
  - PBT: Nicht anwendbar.
  - vPvB: Nicht anwendbar.
- 12.6 Andere schädliche Wirkungen: Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

13.1 Verfahren der Abfallbehandlung
- Ungereinigte Verpackungen:
  - Empfehlung: Entsorgung gemäß den behördlichen Vorschriften.
# ABSCHNITT 14: Angaben zum Transport

- **14.1 UN-Nummer**
  - ADR, ADN, IMDG, IATA entfällt

- **14.2 Ordnungsgemäße UN-Versandbezeichnung**
  - ADR, ADN, IMDG, IATA entfällt

- **14.3 Transportgefahrenklassen**
  - ADR, ADN, IMDG, IATA entfällt

- **14.4 Verpackungsgruppe**
  - ADR, IMDG, IATA entfällt

- **14.5 Umweltgefahren:**
  - Marine pollutant: Nein

- **14.6 Besondere Vorsichtsmaßnahmen für den Verwender**
  - Nicht anwendbar.

- **14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code**
  - Nicht anwendbar.

- **UN "Model Regulation":** -

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# ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**

- **Richtlinie 2012/18/EU**

- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.

- **Nationale Vorschriften:**

- **Wassergefährdungsklasse:** WGK 1 (Selbsteinstufung): schwach wassergefährdend.

- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

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# ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**
  - H302 Gesundheitsschädlich bei Verschlucken.
  - H312 Gesundheitsschädlich bei Hautkontakt.

- **Abkürzungen und Akronym:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
**SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa**

- **1.1 Identificatore del prodotto**
  - Denominazione commerciale: OXALIC ACID, 2% AQUEOUS
  - Articolo numero: 26693-06, 26201-06
  - 1.2 Usi pertinenti identificati della sostanza o miscela e usi sconsigliati: Non sono disponibili altre informazioni.
  - Utilizzazione della Sostanza / del Preparato: Prodotti chimici per laboratorio
  - **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
  - Produttore/fornitore:
    Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400  Fax: 215-412-8450
    email: sgkcek@aol.com
    www.emsdiasum.com
    Societa Italiana Chimici
    Via Rio Nell Ellba 140
    00138 Rome, Italy
    Tel: 39 06 8800211
    Fax: 39 30 06 8815313
    Web: www.sichim.com
  - **Informazioni fornite da:** Product safety department
  - **1.4 Numero telefonico di emergenza:**
    ChemTrec 1-800-424-9300 Contract CCN7661
    1-703-527-3887

**SEZIONE 2: Identificazione dei pericoli**

- **2.1 Classificazione della sostanza o della miscela**
  - **Classificazione secondo il regolamento (CE) n. 1272/2008**
  
  ![GHS05](image)
  Skin Corr. 1A  H314  Provoca gravi ustioni cutanee e gravi lesioni oculari.

  ![GHS07](image)
  Acute Tox. 4  H302  Nocivo se ingerito.
  Acute Tox. 4  H312  Nocivo per contatto con la pelle.
  Acute Tox. 4  H332  Nocivo se inalato.

- **2.2 Elementi dell’etichetta**
  - **Etichettatura secondo il regolamento (CE) n. 1272/2008**
    Il prodotto è classificato ed etichettato conformemente al regolamento CLP.
  - **Pittogrammi di pericolo**
    ![GHS05](image)  ![GHS07](image)
    - **Avvertenza** Pericolo

(continua a pagina 2)
Denominazione commerciale: OXALIC ACID, 2% AQUEOUS

- Componenti pericolosi che ne determinano l'etichettatura:
  acido ossalico
- Indicazioni di pericolo
  H302+H312+H332 Nocivo se ingerito, a contatto con la pelle o se inalato.
  H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- Consigli di prudenza
  P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.
  P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.
  P310 Contattare immediatamente un CENTRO ANTIVELENI/un medico.
  P321 Trattamento specifico (vedere su questa etichetta).
  P405 Conservare sotto chiave.
- P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

SEZIONE 3: Composizione/informazioni sugli ingredienti

- Sostanze pericolose:
  - CAS: 144-62-7
  - EINECS: 205-634-3
  - acido ossalico
  - Acute Tox. 4, H302; Acute Tox. 4, H312
  - ≤ 2,5%

ULteriori indicazioni: Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

SEZIONE 4: Misure di primo soccorso

- Descrizione delle misure di primo soccorso
  - Indicazioni generali: Allontanare immediatamente gli abiti contaminati dal prodotto.
  - Inalazione: Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.
  - Contatto con la pelle: Lavare immediatamente con acqua e sapone sciacquando accuratamente.
  - Contatto con gli occhi: Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.
  - Ingestione: Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del medico.
- Principali sintomi ed effetti, sia acuti che ritardati: Non sono disponibili altre informazioni.
- Indicazione della eventuale necessità di consultare immediatamente un medico e di trattamenti speciali: Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

- Mezzi di estinzione
  - Mezzi di estinzione idonei: CO2, polvere o acqua nebulizzata. Esterignere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.
Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 11.07.2015
Revisione: 11.07.2015

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- 5.3 Raccomandazioni per gli addetti all’estinzione degli incendi
  - Mezzi protettivi specifici: Non sono richiesti provvedimenti particolari.

SEZIONE 6: Misure in caso di rilascio accidentale

- 6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza
  Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.
- 6.2 Precauzioni ambientali:
  Diluire abbondantemente con acqua.
  Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- 6.3 Metodi e materiali per il contenimento e per la bonifica:
  Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).
  Utilizzare mezzi di neutralizzazione.
  Smaltimento del materiale contaminato conformemente al punto 13.
  Provvedere ad una sufficiente areazione.
- 6.4 Riferimento ad altre sezioni
  Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
  Per informazioni relative all’equipaggiamento protettivo ad uso personale vedere Capitolo 8.
  Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- 7.1 Precauzioni per la manipolazione sicura
  Accurata ventilazione/aspirazione nei luoghi di lavoro.
  Evitare la formazione di aerosol.
- Indicazioni in caso di incendio ed esplosione: Non sono richiesti provvedimenti particolari.
- 7.2 Condizioni per l’immagazzinamento sicuro, comprese eventuali incompatibilità
  - Stoccaggio:
    - Requisiti dei magazzini e dei recipienti: Non sono richiesti requisiti particolari.
    - Indicazioni sullo stoccaggio misto: Non necessario.
  - Ulteriori indicazioni relative alle condizioni di immagazzinamento: Mantenere i recipienti ermeticamente chiusi.
- 7.3 Usi finali specifici
  Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell’esposizione/protezione individuale

- Ulteriori indicazioni sulla struttura di impianti tecnici: Nessun dato ulteriore, vedere punto 7.
- 8.1 Parametri di controllo
  - Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:
    | 144-62-7 acido ossalico |
    | TWA | Valore a breve termine: 2 mg/m³ |
    |     | Valore a lungo termine: 1 mg/m³ |
    | VL  | Valore a lungo termine: 1 mg/m³ |
- Ulteriori indicazioni: Le liste valide alla data di compilazione sono state usate come base.
- 8.2 Controlli dell’esposizione
- Mezzi protettivi individuali:
  - Norme generali protettive e di igiene del lavoro:
    Tenere lontano da cibo, bevande e foraggi.
    Togliere immediatamente gli abiti contaminati.
    Lavarsi le mani prima dell’intervallo o a lavoro terminato.
**Scheda di dati di sicurezza**
ai sensi del regolamento 1907/2006/CE, Articolo 31

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Evitare il contatto con gli occhi e la pelle.

- **Maschera protettiva:**
  Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

- **Guanti protettivi:**
  Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto / la sostanza / la formulazione. A causa della mancanza di test non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche. Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

- **Materiale dei guanti**
  La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego.

- **Tempo di permeazione del materiale dei guanti**
  Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

- **Occhiali protettivi:**

**SEZIONE 9: Proprietà fisiche e chimiche**

- **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**
  **Indicazioni generali**

<table>
<thead>
<tr>
<th>Caratteristica</th>
<th>Valore</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspetto:</strong></td>
<td></td>
</tr>
<tr>
<td>Forma:</td>
<td>Liquido</td>
</tr>
<tr>
<td>Colore:</td>
<td>Chiaro</td>
</tr>
<tr>
<td>Odore:</td>
<td>Caratteristico</td>
</tr>
<tr>
<td>Soglia olfattiva:</td>
<td>Non definito</td>
</tr>
<tr>
<td><strong>valori di pH a 20 °C:</strong></td>
<td>0,8</td>
</tr>
<tr>
<td><strong>Cambiamento di stato</strong></td>
<td></td>
</tr>
<tr>
<td>Temperatura di fusione/ambito di fusione:</td>
<td>Non definito</td>
</tr>
<tr>
<td>Temperatura di ebollizione/ambito di ebollizione:</td>
<td>100 °C</td>
</tr>
<tr>
<td><strong>Punto di inflammaribilità:</strong></td>
<td>Non applicabile</td>
</tr>
<tr>
<td><strong>Infiammabilità (solido, gassoso):</strong></td>
<td>Non applicabile</td>
</tr>
<tr>
<td><strong>Temperatura di accensione:</strong></td>
<td></td>
</tr>
<tr>
<td>Temperatura di decomposizione:</td>
<td>Non definito</td>
</tr>
<tr>
<td><strong>Autoaccensione:</strong></td>
<td>Prodotto non autoinfiammabile.</td>
</tr>
<tr>
<td><strong>Pericolo di esplosione:</strong></td>
<td>Prodotto non esplosivo.</td>
</tr>
<tr>
<td><strong>Limiti di inflammaribilità:</strong></td>
<td></td>
</tr>
<tr>
<td>Inferiore:</td>
<td>Non definito</td>
</tr>
</tbody>
</table>

(continua a pagina 5)
Denominazione commerciale: OXALIC ACID, 2% AQUEOUS

Superiore: Non definito.

- Tensione di vapore a 20 °C: 23 hPa
- Densità a 20 °C: 1,04505 g/cm³
- Densità relativa: Non definito.
- Densità del vapore: Non definito.
- Velocità di evaporazione: Non definito.

- Solubilità in/Miscibilità con acqua: Completamente miscibile.
- Coefficiente di distribuzione (n-Octanol/acqua): Non definito.
- Viscosità:
  - Dinamica: Non definito.
  - Cinematica: Non definito.
- Tenore del solvente:
  - Solventi organici: 0,0 %
  - Acqua: 98,0 %
  - VOC (CE): 0,00 %
- Contenuto solido: 5,0 %
- 9.2 Altre informazioni: Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

- 10.1 Reattività
- 10.2 Stabilità chimica
- Decomposizione termica/condizioni da evitare: Il prodotto non si decompone se utilizzato secondo le norme.
- 10.3 Possibilità di reazioni pericolose: Non sono note reazioni pericolose.
- 10.4 Condizioni da evitare: Non sono disponibili altre informazioni.
- 10.5 Materiali incompatibili: Non sono disponibili altre informazioni.
- 10.6 Prodotti di decomposizione pericolosi: Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

- 11.1 Informazioni sugli effetti tossicologici
- Tossicità acuta
- Irritabilità primaria:
- Corrosione/irritazione cutanea: Fortemente corrosivo sulla pelle e sulle mucose.
- Lesioni oculari gravi/irritazioni oculari gravi: Fortemente corrosivo.
- Sensibilizzazione respiratoria o cutanea: Non si conoscono effetti sensibilizzanti.
- Ulteriori dati tossicologici:
  Il prodotto, in base al metodo di calcolo della direttiva generale della Comunità sulla classificazione dei preparati nella sua ultima versione valida, presenta i seguenti rischi:
  - Corrosivo
  - Se ingerito provoca forte corrosione della cavità orale e della faringe con rischio di perforazione dell’esofago e dello stomaco.
SEZIONE 12: Informazioni ecologiche

- 12.1 Tossicità
  - Tossicità acquatica: Non sono disponibili altre informazioni.
- 12.2 Persistenza e degradabilità Non sono disponibili altre informazioni.
- 12.3 Potenziale di bioaccumulo Non sono disponibili altre informazioni.
- 12.4 Mobilità nel suolo Non sono disponibili altre informazioni.
- Ulteriori indicazioni in materia ambientale:
- Ulteriori indicazioni:
  - Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso
  - Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
  - Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.
  - Dilavare grandi quantità nella fognatura o in corpi d'acqua può risultare in un abbassamento del valore pH. Un basso valore pH danneggia gli organismi acquatici. Nella diluizione della concentrazione d'uso si atza il valore pH notevolmente, cosicché dopo l'uso del prodotto le acque di scarico che raggiungono la fognatura sono soltanto poco pericolose per l'acqua.
- 12.5 Risultati della valutazione PBT e vPvB
  - PBT: Non applicabile.
  - vPvB: Non applicabile.
- 12.6 Altri effetti avversi Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- 13.1 Metodi di trattamento dei rifiuti
  - Consigli: Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
  - Imballaggi non puliti:
    - Consigli: Smaltimento in conformità con le disposizioni amministrative.
    - Detergente consigliato: Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- 14.1 Numero ONU
  - ADR, ADN, IMDG, IATA non applicabile
- 14.2 Nome di spedizione dell'ONU
  - ADR, ADN, IMDG, IATA non applicabile
- 14.3 Classi di pericolo connesso al trasporto
  - ADR, ADN, IMDG, IATA non applicabile
- 14.4 Gruppo di imballaggio
  - ADR, IMDG, IATA non applicabile
- 14.5 Pericoli per l'ambiente:
  - Marine pollutant: No
- 14.6 Precauzioni speciali per gli utilizzatori Non applicabile.
- 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC Non applicabile.
### Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

**Denominazione commerciale:** OXALIC ACID, 2% AQUEOUS

### SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Norme e legislazione su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
  - Direttiva 2012/18/UE
  - Sostanze pericolose specificate - ALLEGATO I Nessuno dei componenti è contenuto.
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

### SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Frase rilevante**
  - H302 Nocivo se ingerito.
  - H312 Nocivo per contatto con la pelle.

- **Abbriviazioni e acronimi:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
1 화학제품과 회사에 관한 정보

- 제품 식별자
  - 제품명: OXALIC ACID, 2% AQUEOUS
  - 상품번호: 26693-06, 26201-06
  - 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.
  - 제품의 권고 용도와 사용상의 제한: 실험 실화 학품

- 안전데이터표(Safety Data Sheet) 내 공급업체 관련 상세 정보
  - 제조사/수입자/유통업자 정보:
    Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400 Fax: 215-412-8450
    email: sgkck@aol.com
    www.emsdiasum.com
    Samchang Commercial Co., Ltd.
    Yeo Eui Do
    PO Box 1110
    Seoul, Korea
    Tel: 82 2 703 3040
    Fax: 82 2 717 3298

- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호: ChemTrec 1-800-424-9300 Contract CCN7661
  1-703-527-3887

2 유해성 위험성

- 순물질 또는 혼합물의 분류
  - 부식
  - 피부 부식성/자극성 구분 1 H314 피부에 심한 화상과 눈에 손상을 일으킴

- 라벨표기 요소
  - GHS 라벨 요소
    본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
  - 그림문자
    GHS05

- 신호어 위험
  - 상표상에 명확히 위험성이 표시된 성분: oxalic acid
  - 유해, 위험 문구
    피부에 심한 화상과 눈에 손상을 일으킴
  - 예방조치 문구
    피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시고 피부를 물/사워로 행구시오.
    눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콧나트렌즈를 제거하시오. 계속 씻으시오.
    즉시 특성물질센터/병원 연락 필요.
제품명: OXALIC ACID, 2% AQUEOUS

(라벨 참조) 처치를 하시오.
장금장치가 있는 저장장소에 저장하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
· 기타 유해성

- PBT(전류성. 생물농축성. 독성 물질) 및 vPvB(고 전류성, 고 생물농축성 물질) 평가 결과
- PBT(전류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 전류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특 성: 혼합물
· 설명: 무해한 첨가 물이 함유된 아래에 열거된 물질로 만들 어진 혼합물.
· 위험 요소:

| 144-62-7 oxalic acid | 급성 독성(경구) 구분4, H302; 급성 독성(경피) 구분4, H312 | ≤ 2.5% |

4 응급조치 요령

· 응급조치요령 내용
· 일반적 정보: 이 제품에 의해 오염 된 의상은 즉시 세탁 한다.
· 흡입하였을 때: 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 요양한다.
· 피부에 압었을 때: 즉시 물과 비누로 씻고 잘 행군 한다.
· 눈에 들어갔을 때: 흐르는 물에 눈을 막다 린 후, 의사와 상담한다.
· 먹었을 때: 물을 충분히 마시고 신선한 공기를 빼다. 즉시 의사의 도움을 구한다.
· 기타 의사의 주의사항:

※ 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
※ 즉각적인 의료조치 및 특별치료가 필요함을 시사하는 경우 추가적인 정보가 존재하지 않습니다.

5 폭발. 화재시 대처방법

· 소화제
· 적절한 소화제:

이산 화탄 소, 진 화용 석회 가루 또는 물방 사물 사용하고, 더 큰 화재는 물을 분사 하거나 알코올
이 함유된 거품으로 한다.

· 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.

· 소방관에 대한 권고사항
· 화재 진압 시 적절한 보호구 및 예방조치: 특 별한 조 치가 필요없음.

6 누출 사고 시 대처방법

· 개인적 예방조치, 보호장비 및 응급조치 절차 안 전장 비확 용하고, 무 방 비 의사 함 을 격리 시킨다.
· 환경 관련 예방조치:
   - 적 은 물로 화학 시킨다.
   - 하수도장/해수면 위의물/지하수로 도달하지 않게 한다.
· 일반 및 정화 방법과 소재:
   - 액체가 혼합된 물질(모래, 규조토, 섬성 결합 물, 일반 결합 물, 돌 밥)에 흡입되도록 한다.
   - 증상체제 사용한다.
   - 항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
   - 충분한 환기가 되도록 한다.
· 타 석면 착조
   - 안 전 관련 에 대한 정보는 제7장 을 참고하시오.
7 취급 및 저장방법

취급:

· 안전 취급을 위한 예방조치
  작업장에서는 통풍이 잘되고 습기 제거가 잘되게 주의한다.
  연무질이 형성되는 것을 피한다.

화재 및 폭발 사고 예방대책에 관한 정보: 특별한 조치가 필요없음.

혼합위험성 및 안전 저장 조건

보관:

· 안전한 저장 방법: 특별한 요구사항이 없음.
  · 하나의 공용 보관 시설에 대한 보관 관련 정보: 필요없음
  · 보관 조건에 관한 추가적인 정보: 용기를 새지 않게 밀폐한채 보관한다.
  · 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

노출방지 및 개인보호구

· 첨단시설 디자인에 대한 추가정보: 더 이상의 자료는 없음. 항목 7을 참고하시오.

통제 변수

화학물질의 노출기준, 생물학적 노출기준 등:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>144-62-7 oxalic acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLV (ROK)</td>
<td>단기간의값: 2 mg/m³</td>
<td>장기간의값: 1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>IOELV (EU)</td>
<td>장기간의값: 1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>PEL (USA)</td>
<td>장기간의값: 1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>REL (USA)</td>
<td>단기간의값: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>장기간의값: 1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TLV (USA)</td>
<td>단기간의값: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>장기간의값: 1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>NIC-oxalic acid, anhydrous and dihydrate</td>
<td></td>
</tr>
</tbody>
</table>

· 추가 정보: 제조할 당시에 유효한 목록을 기초로 사용했다.

노출 통제

· 개인 보호구

일반적보호조치 및 위생조치:

식료품, 음료수와 사료로부터 멀리 떨어뜨려 놓는다.
더러워지거나 옷과 먹은 옷은 즉시 탈의한다.
휴식 시간이나 작업이 끝날때마다 손을 씻는다.
눈과 피부와의 접촉은 피한다.

호흡기 보호:

단 시간 또는 경미한 오염의 경우에는 호흡 보호구를 사용한다. 심각한 또는 장기적 노출에서는
호흡 보호 장비를 사용한다.

손 보호:

보호용 장갑
제품명: OXALIC ACID, 2% AQUEOUS

9 물리화학적 특성

<table>
<thead>
<tr>
<th>특성</th>
<th>정보</th>
</tr>
</thead>
<tbody>
<tr>
<td>물리적 상태:</td>
<td>액체</td>
</tr>
<tr>
<td>색:</td>
<td>밝은</td>
</tr>
<tr>
<td>볶음:</td>
<td>특색있는</td>
</tr>
<tr>
<td>후각적취:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>pH:</td>
<td>0.8</td>
</tr>
<tr>
<td>상대밀도: 녹는점/氷의 점:</td>
<td>맞지 않음</td>
</tr>
<tr>
<td>초기 끓는점과 끓는점 범위:</td>
<td>100 °C</td>
</tr>
<tr>
<td>인화성:</td>
<td>해당사항 없음</td>
</tr>
<tr>
<td>인화성(고체, 기체):</td>
<td>해당사항 없음</td>
</tr>
<tr>
<td>점화온도:</td>
<td></td>
</tr>
<tr>
<td>분해 온도:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>자기점화:</td>
<td>이제품은 자연발화성이 없음</td>
</tr>
<tr>
<td>독발위험:</td>
<td>이제품은 독발 위험성이 없음</td>
</tr>
<tr>
<td>인화 또는 독발 범위의 상한/하한:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>아래로:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>위로:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>증기압:</td>
<td>23 hPa</td>
</tr>
<tr>
<td>밀도:</td>
<td>1.04505 g/cm³</td>
</tr>
<tr>
<td>비중:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>증기밀도:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>증발 속도:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>용해도:</td>
<td>완전히 혼합할 수 있습니다</td>
</tr>
<tr>
<td>수:</td>
<td>알맞지 않다</td>
</tr>
<tr>
<td>n 육탄올/물 분배계수:</td>
<td>알맞지 않다</td>
</tr>
</tbody>
</table>
제품명: OXALIC ACID, 2% AQUEOUS

<table>
<thead>
<tr>
<th>· 정도</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>· 역학성</td>
<td>알맞지 않다.</td>
</tr>
<tr>
<td>· 동점성</td>
<td>알맞지 않다.</td>
</tr>
<tr>
<td>· 용매내용물</td>
<td></td>
</tr>
<tr>
<td>· 유기용매</td>
<td>0.0 %</td>
</tr>
<tr>
<td>· 물</td>
<td>98.0 %</td>
</tr>
<tr>
<td>· VOC (EU)</td>
<td>0.00 %</td>
</tr>
<tr>
<td>· 고체의 함량</td>
<td>5.0 %</td>
</tr>
<tr>
<td>· 기타 정보</td>
<td>추가적인 정보가 존재하지 않습니다.</td>
</tr>
</tbody>
</table>

10 안정성 및 반응성

· 반응성
· 화학적 안정성
· 화학적 안정성 및 유해 반응의 가능성 / 피해할 조건: 규정에 따라 사용할 경우에만
· 유해반응 가능성: 당연히 반응으로는 알 수 없었다.
· 피해할 조건: 추가적인 정보가 존재하지 않습니다.
· 동점성: 추가적인 정보가 존재하지 않습니다.
· 유해분해물질: 위험성 있는 분해물들은 알려지지 않았다.

11 특성에 관한 정보

· 독성학적 영향에 대한 정보
· 급성 독성:
  · 일차적 자극 효과:
    · 피부 부식성 또는 자극성: 피부의 자극에 제한적인 반응을 보인다.
    · 심한 눈 손상 또는 자극성: 강한 부식작용
    · 감각화: 민감한 영향이 없는 것으로 알려져 있다.
· 부작용의 조건에 관한 정보:
  · 이 제품은 유럽 공동체의 공동분류 및 재화의 허용 등에 근거하여 농축화된 원료에서 아래의 사항이 분류乐器 후에 사용하기로 한다.
  · 가독성의: 삼키는 식물의 임파한 임파의 관리가 없는 상태를 주는 위험과 괴로운 치료를 주는 원료의 도달가능한 일부분을 추천한다.

12 환경에 미치는 영향

· 독성:
· 수생독성: 추가적인 정보가 존재하지 않습니다.
· 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
· 환경 시스템에의 행동:
· 생물적 적정성 추가적인 정보가 존재하지 않습니다.
· 토양내 이동성 추가적인 정보가 존재하지 않습니다.
· 추가적인 생태학 정보:
· 일반 특성:
  · 수질오염등급 1 (자체등급분류): 약하게 수질오염이 아닌
    · 흉터시키지 않은 체중대량으로 지하수나 하천으로 그려지고 수도원에도 담치지 않게 한다.
    · 흉터시키지 않은 체중대량 또는 환경적 시키지 않은 체중대량으로 바꾸어도 담치지 않게 한다.

(6 쪽 계속)
제품명: OXALIC ACID, 2% AQUEOUS

많은 양을 수도관이나 하천으로 방류하게되면, pH 수치는 떨어집니다. 낮아진 pH 수치는 물 속의 유기체를 손상시킵니다. 사용능력은 회식시키며 pH 수치는 현저하게 높아지게 됩니다. 그러므로 제품을 사용한 후에 수도관에도 달되는 폐수는 물에 미치는 위험이 약해지게 됩니다.

-PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 전기반응성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 전기반응성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- 폐기물 처리 방법
  - 권고: 생활쓰레기와 함께 처리되어서는 안입니다. 하수도로 유입되어서는 안됩니다.
  - 비위생적 포장: 당국의 지침에 입각하여 처리되어야 합니다.
  - 주 전 세정제: 경우에 따라서 세제기름에 묻히는 등의 방법

14 운송에 필요한 정보

- 유엔 번호
  - ADR, ADN, IMDG, IATA: 누락되다
  - UN 적정 선적명
    - ADR, ADN, IMDG, IATA: 누락되다
- 교통 위험 클래스
  - ADR, ADN, IMDG, IATA: 누락되다
- 통급
  - ADR, ADN, IMDG, IATA: 누락되다
- 용기등급
  - ADR, ADN, IATA: 누락되다
- 환경적 유해물질:
  - 해양오염물질: 아니오
- 이용자의 특별 예방조치
  - 해당사항 없음.
- MARPOL 73/78(선박으로부터의 해양오염방지협정) 부속서2 및 IBC Code(국제선적화물코드)에 따른 빌크(bulk) 운송
  - 해당사항 없음.
- UN "모범 규제": -

15 법적 규제현황

- 해당 순위를 또는 측정된 에 대한 안전, 보건 및 환경 규제/법률
  - Korean Existing Chemical Inventory
    - 144-62-7 oxalic acid KE-13152
    - 7732-18-5 water, distilled, conductivity or of similar purity KE-35400
  - GHS 라벨 요소
    - 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
안전지침서
제31조의 1907/2006/EC에 따라

제품명: OXALIC ACID, 2% AQUEOUS

위험 도표

GHS05

표지어 위험

상표상에 명확히 위험성표시된성분:
oxalic acid

위험 문구

피부에 심한 화상과 눈에 손상을 일으킴

주의 문구

피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오. 피부를 물/샤워로 행구시오. 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하시오. 계속 씻으시오. (라벨 참조) 처치를 하십시오.

잠금장치가 있는 저장장소에 저장하시오.
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

화학물질 안전성 평가: 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는 우리지식에대한오늘날의상태에대하여평가하고 있다. 하지만이보고서는생산특성에관한보중은

최초 작성일자: 2015.07.11
개정 횟수 및 최초 개정일자: 1 / 2015.07.11
약어와 두문자어:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
급성 독성(경구): 구분: Acute toxicity, Hazard Category 4
피부 부식성/자극성 구분: Skin corrosion/irritation, Hazard Category 1
**SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa**

- **1.1 Identificador del producto**
  - **Nombre comercial:** OXALIC ACID, 2% AQUEOUS
  - **Número del artículo:** 26693-06, 26201-06
- **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**
  - No existen más datos relevantes disponibles.
- **1.3 Datos del proveedor de la ficha de datos de seguridad**
  - **Fabricante/distribuidor:** Electron Microscopy Sciences
    1560 Industry Road
    USA-Hatfield, PA 19440
    Tel: 215-412-8400  Fax: 215-412-8450
    email: sgkck@aol.com
    www.emsdiasum.com
  - **Área de información:** Product safety department
  - **1.4 Teléfono de emergencia:**
    ChemTrec 1-800-424-9300 Contract CCN7661
    1-703-527-3887

**SECCIÓN 2: Identificación de los peligros**

- **2.1 Clasificación de la sustancia o de la mezcla**
  - **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**
  - GHS05 corrosión
    Skin Corr. 1A  H314  Provoca quemaduras graves en la piel y lesiones oculares graves.
  - GHS07
    Acute Tox. 4  H302  Nocivo en caso de ingestión.
    Acute Tox. 4  H312  Nocivo en contacto con la piel.
    Acute Tox. 4  H332  Nocivo en caso de inhalación.
- **2.2 Elementos de la etiqueta**
  - **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**
    El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

( se continua en página 2 )
Nombre comercial: OXALIC ACID, 2% AQUEOUS

- Pictogramas de peligro

GHS05  GHS07

- Palabra de advertencia Peligro

- Componentes peligrosos a indicar en el etiquetaje:
  ácido oxálico

- Indicaciones de peligro
  H302+H312+H332 Nocivo en caso de ingestión, contacto con la piel o inhalación.
  H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

- Consejos de prudencia
  P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ducharse.
  P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
  P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.
  P321 Se necesita un tratamiento específico (ver en esta etiqueta).
  P405 Guardar bajo llave.
  P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

- 2.3 Otros peligros
  - Resultados de la valoración PBT y mPmB
    - PBT: No aplicable.
    - mPmB: No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

- 3.2 Caracterización química: Mezclas
  - Descripción: Mezcla formada por las substancias especificadas a continuación con adiciones no peligrosas.
  - Componentes peligrosos:

    | CAS: 144-62-7 | ácido oxálico | Acute Tox. 4, H302; Acute Tox. 4, H312 | ≤ 2,5% |
    | EINECS: 205-634-3 |  |

  - Indicaciones adicionales: El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

SECCIÓN 4: Primeros auxilios

- 4.1 Descripción de los primeros auxilios
  - Instrucciones generales: Quitarse de inmediato toda prenda contaminada con el producto.
  - En caso de inhalación del producto:
    Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.
  - En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.
  - En caso de con los ojos:
    Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.
  - En caso de ingestión: Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.
  - 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.
SECCIÓN 5: Medidas de lucha contra incendios

- 5.1 Medios de extinción
- Sustancias extintoras apropiadas:
  CO2, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.
- 5.2 Peligros específicos derivados de la sustancia o la mezcla No existen más datos relevantes disponibles.
- 5.3 Recomendaciones para el personal de lucha contra incendios
  - Equipo especial de protección: No se requieren medidas especiales.

SECCIÓN 6: Medidas en caso de vertido accidental

- 6.1 Precauciones personales, equipo de protección y procedimientos de emergencia
  Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- 6.2 Precauciones relativas al medio ambiente:
  Diluir con mucha agua.
  Evitar que penetre en la canalización/aguas de superficie/agua subterráneas.
- 6.3 Métodos y material de contención y de limpieza:
  Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).
  Utilizar un neutralizador.
  Desechar el material contaminado como vertido según item 13.
  Asegurar suficiente ventilación.
- 6.4 Referencia a otras secciones
  Ver capítulo 7 para mayor información sobre una manipulación segura.
  Ver capítulo 8 para mayor información sobre el equipo personal de protección.
  Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

- 7.1 Precauciones para una manipulación segura
  Asegurar suficiente ventilación/aspiración en el puesto de trabajo.
  Evitar la formación de aerosoles.
  - Prevención de incendios y explosiones: No se requieren medidas especiales.
- 7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades
  - Almacenamiento:
  - Exigencias con respecto al almacen y los recipientes: No se requieren medidas especiales.
  - Normas en caso de un almacenamiento conjunto: No es necesario.
  - Indicaciones adicionales sobre las condiciones de almacenamiento:
    Mantener el recipiente cerrado herméticamente.
- 7.3 Usos específicos finales No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:
  Sin datos adicionales, ver punto 7.
Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

fecha de impresión 11.07.2015
Revisión: 11.07.2015

Nombre comercial: OXALIC ACID, 2% AQUEOUS

- 8.1 Parámetros de control
- Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:

| 144-62-7 ácido oxálico | LEP Valor de larga duración: 1 mg/m³ |

- Indicaciones adicionales: Como base se han utilizado las listas vigentes en el momento de la elaboración.

- 8.2 Controles de la exposición
- Equipo de protección individual:
  - Medidas generales de protección e higiene:
    - Mantener alejado de alimentos, bebidas y alimentos para animales.
    - Quitarse de inmediato la ropa ensuciada o impregnada.
    - Lavarse las manos antes de las pausas y al final del trabajo.
    - Evitar el contacto con los ojos y la piel.

- Protección respiratoria:
  - Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

- Protección de manos:
  - Guantes de protección
    
    El material del guante deberá ser impermeable y resistente al producto / substancia / preparado.
    Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de substancias químicas.
    Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

- Material de los guantes
  - La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser avaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

- Tiempo de penetración del material de los guantes
  - El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

- Protección de ojos:
  - Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

- 9.1 Información sobre propiedades físicas y químicas básicas
- Datos generales
  - Aspecto:
    - Forma: Líquido
    - Color: Claro
    - Olor: Característico
    - Umbral olfativo: No determinado.
Nombre comercial: OXALIC ACID, 2% AQUEOUS

<table>
<thead>
<tr>
<th>Propiedad</th>
<th>Valor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valor pH a 20 °C</td>
<td>0,8</td>
</tr>
<tr>
<td>Cambio de estado</td>
<td></td>
</tr>
<tr>
<td>Punto de fusión /campo de fusión</td>
<td>Indeterminado</td>
</tr>
<tr>
<td>Punto de ebullición /campo de ebullición</td>
<td>100 °C</td>
</tr>
<tr>
<td>Punto de inflamación</td>
<td>No aplicable</td>
</tr>
<tr>
<td>Inflamabilidad (sólido, gaseiforme)</td>
<td>No aplicable</td>
</tr>
<tr>
<td>Temperatura de ignición</td>
<td></td>
</tr>
<tr>
<td>Temperatura de descomposición</td>
<td>No determinado</td>
</tr>
<tr>
<td>Autoinflamabilidad</td>
<td>El producto no es autoinflamable.</td>
</tr>
<tr>
<td>Peligro de explosión</td>
<td>El producto no es explosivo.</td>
</tr>
<tr>
<td>Límites de explosión</td>
<td></td>
</tr>
<tr>
<td>Inferior</td>
<td>No determinado</td>
</tr>
<tr>
<td>Superior</td>
<td>No determinado</td>
</tr>
<tr>
<td>Presión de vapor a 20 °C</td>
<td>23 hPa</td>
</tr>
<tr>
<td>Densidad a 20 °C</td>
<td>1,04505 g/cm³</td>
</tr>
<tr>
<td>Densidad relativa</td>
<td>No determinado</td>
</tr>
<tr>
<td>Densidad de vapor</td>
<td>No determinado</td>
</tr>
<tr>
<td>Velocidad de evaporación</td>
<td>No determinado</td>
</tr>
<tr>
<td>Solubilidad en / miscibilidad con agua</td>
<td>Completamente mezclable.</td>
</tr>
<tr>
<td>Coeficiente de reparto (n-octanol/agua)</td>
<td>No determinado</td>
</tr>
<tr>
<td>Viscosidad</td>
<td></td>
</tr>
<tr>
<td>Dinámica</td>
<td>No determinado</td>
</tr>
<tr>
<td>Cinemática</td>
<td>No determinado</td>
</tr>
<tr>
<td>Concentración del disolvente</td>
<td></td>
</tr>
<tr>
<td>Disolventes orgánicos</td>
<td>0,0 %</td>
</tr>
<tr>
<td>Agua</td>
<td>98,0 %</td>
</tr>
<tr>
<td>VOC (CE)</td>
<td>0,00 %</td>
</tr>
<tr>
<td>Contenido de cuerpos sólidos</td>
<td>5,0 %</td>
</tr>
<tr>
<td>9.2 Información adicional</td>
<td>No existen más datos relevantes disponibles.</td>
</tr>
</tbody>
</table>

SECCIÓN 10: Estabilidad y reactividad

10.1 Reactividad
10.2 Estabilidad química
Descomposición térmica / condiciones que deben evitarse: No se descompone al emplearse adecuadamente.
10.3 Posibilidad de reacciones peligrosas No se conocen reacciones peligrosas.
10.4 Condiciones que deben evitarse No existen más datos relevantes disponibles.
10.5 Materiales incompatibles: No existen más datos relevantes disponibles.
10.6 Productos de descomposición peligrosos: No se conocen productos de descomposición peligrosos.
SECCIÓN 11: Información toxicológica

- 11.1 Información sobre los efectos toxicológicos
  - Toxicidad aguda
  - Efecto estimulante primario:
    - Corrosión o irritación cutáneas Fuerte efecto cáustico en la piel y las mucosas.
    - Lesiones o irritación ocular graves Fuerte efecto cáustico
    - Sensibilización respiratoria o cutánea No se conoce ningún efecto sensibilizante.
  - Indicaciones toxicológicas adicionales:
    En conformidad con el procedimiento de cálculo contenido en la última versión de la Normativa General de Clasificación de la CE para Preparados, el producto tiene los siguientes riesgos:
    - Corrosivo
    - La ingestión produce un fuerte efecto cáustico en la boca y la faringe, así como el peligro de perforación del esófago y del estómago.

SECCIÓN 12: Información ecológica

- 12.1 Toxicidad
  - Toxicidad acuática: No existen más datos relevantes disponibles.
- 12.2 Persistencia y degradabilidad No existen más datos relevantes disponibles.
- 12.3 Potencial de bioacumulación No existen más datos relevantes disponibles.
- 12.4 Movilidad en el suelo No existen más datos relevantes disponibles.
- Indicaciones medioambientales adicionales:
  - Indicaciones generales:
    - Nivel de riesgo para el agua 1 (autoclasificación): escasamente peligroso para el agua
      - En estado no diluido o no neutralizado, no dejar que se infiltré en aguas subterráneas, aguas superficiales o en alcantarillados.
      - En estado no diluido o no neutralizado, no vertir en el alcantarillado o en otros sistemas de desagüe.
      - El vertido de grandes cantidades en la canalización o en las aguas puede causar un aumento del valor pH. Un valor de pH alto es nocivo para los organismos acuáticos. En la dilución de la concentración de la aplicación, el valor pH se reduce considerablemente, de modo que después de utilizar el producto, las aguas residuales vertidas en la canalización son mínimamente dañinas para el agua.
- 12.5 Resultados de la valoración PBT y mPmB
  - PBT: No aplicable.
  - mPmB: No aplicable.
- 12.6 Otros efectos adversos No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- 13.1 Métodos para el tratamiento de residuos
  - Recomendación: No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- Embalajes sin limpiar:
  - Recomendación: Eliminar conforme a las disposiciones oficiales.
- Producto de limpieza recomendado: Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

- 14.1 Número UN
  - ADR, ADN, IMDG, IATA suprimido
Nombre comercial: OXALIC ACID, 2% AQUEOUS

- **14.2 Designación oficial de transporte de las Naciones Unidas**
  - ADR, ADN, IMDG, IATA: suprimido

- **14.3 Clase(s) de peligro para el transporte**
  - ADR, ADN, IMDG, IATA: suprimido

- **14.4 Grupo de embalaje**
  - ADR, IMDG, IATA: suprimido

- **14.5 Peligros para el medio ambiente:**
  - Contaminante marino: No

- **14.6 Precauciones particulares para los usuarios**
  - No aplicable.

- **14.7 Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC**
  - No aplicable.

- **"Reglamentación Modelo" de la UNECE:** -

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**SECCIÓN 15: Información reglamentaria**

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
  - Directiva 2012/18/UE
  - Sustancias peligrosas nominadas - ANEXO I: ninguno de los componentes está incluido en una lista

- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

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**SECCIÓN 16: Otra información**

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Frases relevantes**
  - H302 Nocivo en caso de ingestión.
  - H312 Nocivo en contacto con la piel.

- **Abreviaturas y acrónimos:**
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - VOC: Volatile Organic Compounds (USA, EU)
  - Acute Tox. 4: Acute toxicity, Hazard Category 4
  - Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A