SAFETY DATA SHEET

Version 2.2
Revision Date 24.07.2016
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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name: oxalic acid dihydrate
CAS-No. 6153-56-6

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

Oxalic acid is best known as an agent in wood bleaching. Oxalic acid also is a popular cleaning agent. Oxalic acid can be used to remove rust stains from kitchen counter tops, plumbing pipes and even fabric. It's also used in the treatment of wastewater, because oxalic acid helps remove calcium from water. It even can be used as a reducing agent for photography.

1.3 Details of the supplier of the safety data sheet

Company: Tianjin Chengyi International Trading Co., Ltd.
Room 1309, Wufeng Building, No.11 Zhenxing Street, National Hi-Tech Industrial Development Zone of Taiyuan, Shanxi, China. Post Code 030006
Tel:+86 351-8281246
Fax:+86 351-8206170

1.4 Emergency telephone Number:
Chembrc at 1-800-424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 4)
Acute toxicity, Dermal (Category 4)

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning
Hazard statement(s)
H302 + H312 Harmful if swallowed or in contact with skin
Precautionary statement(s)
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves/ protective clothing.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you...
feel unwell. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 + P310 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 or doctor/physician.
P363 Wash contaminated clothing before reuse.
P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances Synonyms: Ethanedioic acid
Formula: C₂H₂O₄·2H₂O
Molecular Weight: 126.07 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>Oxalic acid dihydrate</td>
<td></td>
</tr>
<tr>
<td>CAS-No. 6153-56-6</td>
<td>≥99.6%</td>
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<tr>
<td>EC-No. 205-634-3</td>
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</tbody>
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4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.
4.3 Indication of any immediate medical attention and special treatment needed
no data available

5. FIRE-FIGHTING MEASURES
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

7.3 Specific end uses
No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
8.1 Control parameters
Components with workplace control parameters
OEL (TWA): 1 mg/m³ (ACGIH 1990-1991).
OEL (como STEL): 2 mg/m³ (ACGIH 1990-1991).
DNEL for workers:
Local effects - acute: DNEL (derived not effect level) dermal: 0.69 mg / cm²
Systemic effects - long term: DNEL (derived not effect level) dermal: 2.29 mg / kg bw / day
Systemic effects - long term: DNEL (derived not effect level) inhalation: 4.03 mg / m³
DNEL for the general population:
Local effects - acute: DNEL (derived not effect level) Dermal: 0.35 mg / cm²
Systemic effects - long term: DNEL (derived not effect level) Dermal: 1.14 mg / kg bw / day
Systemic effects - long term: DNEL (derived not effect level) Oral: 1.14 mg / m³
PNEC water (freshwater): 0.1622 mg / L
PNEC water (sea water): 0.01622
PNEC water (intermittent spills): 1,622 mg / L

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Wash and dry hands.

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES
9.1 Information on basic physical and chemical properties

a) Appearance
Form: crystalline
b) Odour
odourless
c) Odour Threshold
no data available
d) pH
1 at 108g/L at 25 °C (sol.)
e) Melting point/freezing point
Melting point/range: 95.42°C
f) Initial boiling point and
no data available
boiling range

g) Flashpoint no data available

h) Evaporation rate no data available

i) Flammability(solid, gas) non flammable

j) Upper/lower flammability or explosive limits no data available

k) Vapour pressure < 0.01 hPa at 20 °C

l) Vapour density (air = 1) no data available

m) Relative density ca. 1900 kg/m³

n) Water solubility ca.108 g/L at 25 °C

o) Partition coefficient:n-octanol/water log Pow: -0.81

p) Autoignition temperature no data available

q) Decomposition temperature no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidizing properties no data available

9.2 Other safety information:

Bulk density 0.90 g/l

10. STABILITY AND REACTIVITY

10.1 Reactivity no data available

10.2 Chemical stability no data available

10.3 Possibility of hazardous reactions no data available

10.4 Conditions to avoid

Avoid moisture.

10.5 Incompatible materials

Bases, Metals, Acid chlorides, Alkali metals

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 1,080 mg/kg

Inhalation: No data available

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Risk of serious damage to eyes.
(OECD Test Guideline 405)
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
Result: Not mutagenic in Ames Test
Histidine reversion (Ames)
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
Possible risk of congenital malformation in the fetus.
No data available
Specific target organ toxicity - single exposure
No data available
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: Not available
Effects due to ingestion may include:, Nausea, Vomiting, Local irritation
Inhalation may provoke the following symptoms:, Cough, Shortness of breath
Kidney injury may occur,, Cardiovascular effects.
Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION
12.1 Toxicity
   Toxicity to fish LC50 - Leuciscus idus (Golden orfe) - 160 mg/l - 48 h
   Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 137 mg/l - 48 h
12.2 Persistence and degradability
   no data available
12.3 Bioaccumulative potential
12.4 Mobility in soil
no data available
12.5 Results of PBT and vPvB assessment
no data available
12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION
DOT (US)
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

15. REGULATORY INFORMATION
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
TSCA: substance is listed
15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION
Further information
Tianjin Chengyi International Trading Co., Limited. gives no warranty, express or implied, as to the accuracy or completeness of this information. It is the user’s responsibility to determine the suitability of this information for the adoption of necessary safety precautions and/or compliance with federal, state, and local laws and regulations.

End of SDS