SAFETY DATA SHEET

1. Identification

Product identifier: Sodium Hydroxide, Solution

Other means of identification
CAS No.: 1310-73-2

Recommended restrictions
Recommended use: For Laboratory, Research or Manufacturing Use.
Restrictions on use: Not determined.

Details of the supplier of the safety data sheet

Manufacturer
Company Name: Quality Environmental Containers, Inc.
Address: 607 Industrial Park Road
          Beaver, WV 25813
Telephone: 800-255-2950
E-mail: info@qecusa.com

Emergency telephone number:
CHEMTREC: 1-800-424-9300 within US and Canada

2. Hazard(s) identification

Hazard Classification

Physical Hazards
Corrosive to metal Category 1

Health Hazards
Skin Corrosion/Irritation Category 1A
Serious Eye Damage/Eye Irritation Category 1
Specific Target Organ Toxicity - Single Exposure

Target Organs
1. Respiratory tract irritation.

Unknown toxicity - Health
Acute toxicity, oral 0 %
Acute toxicity, dermal 0 %
Acute toxicity, inhalation, vapor 40 %
Acute toxicity, inhalation, dust or mist 40 %
Environmental Hazards

Acute hazards to the aquatic environment  Category 3

Unknown toxicity - Environment

Acute hazards to the aquatic environment  0 %
Chronic hazards to the aquatic environment  40 %

Label Elements

Hazard Symbol:

Signal Word: Danger
Hazard Statement:
May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.
Harmful to aquatic life.

Precautionary Statements

Prevention:
Keep only in original packaging. Do not breathe dust/mist/vapors. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Avoid release to the environment.

Response:
Absorb spillage to prevent material damage. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. 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. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Specific treatment (see on this label). Collect spillage.

Storage:
Store in a corrosion-resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal:
Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC):
None.

3. Composition/information on ingredients
Mixtures

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>20 - 40%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

**General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

**Ingestion:** Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Inhalation:** Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.

**Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.

**Most important symptoms/effects, acute and delayed**

**Symptoms:** Causes severe skin and eye burns. Causes digestive tract burns. Mist or vapor extremely irritating to eyes and respiratory tract.

**Hazards:** None known.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** Symptoms may be delayed.

5. Fire-fighting measures

**General Fire Hazards:** The product is non-combustible. Product is highly caustic. Wear protective gear if spilled during fire fighting.

**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media:** The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media:** None known.

**Specific hazards arising from the chemical:** Product is highly caustic. Wear appropriate protective gear if spilled during firefighting. Contact with metals may evolve flammable hydrogen gas.

**Special protective equipment and precautions for firefighters**
**Special fire fighting procedures:**
Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters:**
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures:**
Put on protective equipment before entering danger area. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and material for containment and cleaning up:**
Neutralize spill area and washings with dilute acetic acid. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Collect in a non-combustible container for prompt disposal. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:**
Inform authorities if large amounts are involved.

**Environmental Precautions:**
Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

### 7. Handling and storage

**Precautions for safe handling:**
Use personal protective equipment as required. Avoid breathing mists or vapors. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Wash hands thoroughly after handling. Do not eat, drink or smoke when using the product. See Section 8 of the SDS for Personal Protective Equipment.

**Conditions for safe storage, including any incompatibilities:**
Do not store in metal containers. Keep container tightly closed. Store in a well-ventilated place. Store in a dry place.

### 8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2010)</td>
</tr>
<tr>
<td></td>
<td>Ceil_Time</td>
<td>2 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>US. Tennessee, OELs, Occupational Exposure Limits, Table Z1A (06 2008)</td>
</tr>
<tr>
<td></td>
<td>ST ESL</td>
<td>20 µg/m³</td>
<td>US. Texas, Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)</td>
</tr>
<tr>
<td></td>
<td>AN ESL</td>
<td>2 µg/m³</td>
<td>US. Texas, Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>2 mg/m³</td>
<td>US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)</td>
</tr>
</tbody>
</table>
Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Eye/face protection: Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing and gloves.

Respiratory Protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Avoid contact with skin. Do not get in eyes. Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance

Physical state: Liquid
Form: Liquid
Color: Colorless
Odor: Odorless
Odor threshold: No data available.

pH: 14 (20 °C)
Melting point/freezing point: 1 °C
Initial boiling point and boiling range: 115 °C
Flash Point: not applicable (water-based)
Evaporation rate: As water
Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.

Vapor pressure: As water
Vapor density: As water
Density: 1.26 g/ml (20 °C)
Relative density: 1.26 (20 °C)

Solubility(ies)

Solubility in water: Miscible with water.
Solubility (other): No data available.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: No data available.
Decomposition temperature: No data available.
Viscosity: No data available.

10. Stability and reactivity

Reactivity: Reacts violently with strong acids.
Chemical Stability: Material is stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Avoid contact with oxidizing agents. Reacts violently with strong acids.
Hazardous Decomposition Products: Sodium oxides

11. Toxicological information

Information on likely routes of exposure
Inhalation: May cause damage to mucous membranes in nose, throat, lungs and bronchial system.
Skin Contact: Causes severe skin burns.
Eye contact: Causes serious eye damage.
Ingestion: May cause burns of the gastrointestinal tract if swallowed.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)
Oral Product: No data available.
Dermal Product: No data available.
Inhalation Product: No data available.

Repeated dose toxicity Product: No data available.

Skin Corrosion/Irritation Product: Causes severe skin burns.
Serious Eye Damage/Eye Irritation Product: Causes serious eye damage.
Respiratory or Skin Sensitization
Product: Not a skin sensitizer.

Carcinogenicity
Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No mutagenic components identified

In vivo
Product: No mutagenic components identified

Reproductive toxicity
Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure
Product: Respiratory tract irritation.

Specific Target Organ Toxicity - Repeated Exposure
Product: None known.

Target Organs
Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.

Aspiration Hazard
Product: Not classified

Other effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Sodium hydroxide
LOAEL (Sander lucioperca, 24 h): >= 35 mg/l
LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 125 mg/l
LC 50 (Lepomis macrochirus, 48 h): 99 mg/l

Aquatic Invertebrates
Product: No data available.
**Specified substance(s):**  
Sodium hydroxide  

LC 50 (Ophryotrocha diadema, 48 h): 33 - 100 mg/l  
LOAEL (Daphnia magna): 40 - 240 mg/l  
LC 50 (Cockle, 48 h): 330 - 1,000 mg/l  
EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34.59 - 47.13 mg/l  
EC 50 (Ceriodaphnia sp., 48 h): 40.4 mg/l

**Chronic hazards to the aquatic environment:**

**Fish**  
***Product:*** No data available.

**Aquatic Invertebrates**  
***Product:*** No data available.

**Toxicity to Aquatic Plants**  
***Product:*** No data available.

**Persistence and Degradability**

**Biodegradation**  
***Product:*** Expected to be readily biodegradable.

**BOD/COD Ratio**  
***Product:*** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**  
***Product:*** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**  
***Product:*** No data available.

**Mobility in soil:**  
The product is water soluble and may spread in water systems.

**Other adverse effects:**  
Harmful to aquatic organisms. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

### 13. Disposal considerations

**Disposal instructions:**  
Discharge, treatment, or disposal may be subject to national, state, or local laws. Since emptied containers retain product residue, follow label warnings even after container is emptied.

**Contaminated Packaging:**  
Since emptied containers retain product residue, follow label warnings even after container is emptied.
14. Transport information

**DOT**
- **UN Number:** UN 1824
- **UN Proper Shipping Name:** Sodium hydroxide solution
- **Transport Hazard Class(es):**
  - **Class:** 8
  - **Label(s):** 8
- **Packing Group:** II
- **Marine Pollutant:** No
- **Special precautions for user:** Not determined.

**IMDG**
- **UN Number:** UN 1824
- **UN Proper Shipping Name:** SODIUM HYDROXIDE SOLUTION
- **Transport Hazard Class(es):**
  - **Class:** 8
  - **Label(s):** 8
- **EmS No.:** F-A, S-B
- **Packing Group:** II
- **Marine Pollutant:** No
- **Special precautions for user:** Not determined.

**IATA**
- **UN Number:** UN 1824
- **Proper Shipping Name:** Sodium hydroxide solution
- **Transport Hazard Class(es):**
  - **Class:** 8
  - **Label(s):** 8
- **Packing Group:** II
- **Marine Pollutant:** No
- **Special precautions for user:** Not determined.

15. Regulatory information

**US Federal Regulations**
- **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):**
  - None present or none present in regulated quantities.

- **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):**
  - None present or none present in regulated quantities.

- **CERCLA Hazardous Substance List (40 CFR 302.4):**
  - | Chemical Identity   | Reportable quantity |
  - |---------------------|---------------------|
  - | Sodium hydroxide    | 1000 lbs.           |

- **Superfund Amendments and Reauthorization Act of 1986 (SARA):**
  - **Hazard categories:**
    - Corrosive to metal
    - Skin Corrosion or Irritation
    - Serious eye damage or eye irritation
    - Specific target organ toxicity (single or repeated exposure)
  - **SARA 302 Extremely Hazardous Substance:**
    - None present or none present in regulated quantities.
SARA 304 Emergency Release Notification

**Chemical Identity** | **Reportable quantity**
--- | ---
Sodium hydroxide | 1000 lbs.

SARA 311/312 Hazardous Chemical

**Chemical Identity** | **Threshold Planning Quantity**
--- | ---
Sodium hydroxide | 10000 lbs.

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):

**Chemical Identity** | **Reportable quantity**
--- | ---
Sodium hydroxide | Reportable quantity: 1000 lbs.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

**Chemical Identity**

Sodium hydroxide

US. Massachusetts RTK - Substance List

**Chemical Identity**

Sodium hydroxide

US. Pennsylvania RTK - Hazardous Substances

**Chemical Identity**

Sodium hydroxide

US. Rhode Island RTK

**Chemical Identity**

Sodium hydroxide

International regulations

Montreal protocol

not applicable

Stockholm convention

not applicable

Rotterdam convention

not applicable

Kyoto protocol

not applicable
Inventory Status:
- Australia AICS: On or in compliance with the inventory
- Canada DSL Inventory List: On or in compliance with the inventory
- EINECS, ELINCS or NLP: On or in compliance with the inventory
- Japan (ENCS) List: On or in compliance with the inventory
- Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
- Philippines PICCS: On or in compliance with the inventory
- US TSCA Inventory: On or in compliance with the inventory
- New Zealand Inventory of Chemicals: On or in compliance with the inventory
- China Inv. Existing Chemical Substances: On or in compliance with the inventory
- Mexico INSQ: On or in compliance with the inventory
- Taiwan Chemical Substance Inventory: On or in compliance with the inventory

16. Other information, including date of preparation or last revision

NFPA Hazard ID

0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 02-23-2018

Revision Information: Not relevant.

Version #: 1.2

Source of information: Sources of information used in preparing this SDS included one or more of the following: results from in house or supplier toxicology studies, information from the Toxicology Data Network (TOXNET), European Chemical Agency (ECHA) substance dossiers, IARC Monographs, US National Toxicology Program data, the Agency for Toxic Substances and Disease Registry, other manufacturer’s SDSs and other sources, as appropriate.

Further Information: No data available.
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SAFETY DATA SHEET

1. Identification

Product Name: Zinc acetate
Cat No.: AC370080000; AC370080250; AC370081000
CAS-No: 557-34-6
Synonyms: Acetic acid, zinc salt.
Recommended Use: Laboratory chemicals.
Uses advised against: Food, drug, pesticide or biocidal product use

2. Hazard(s) identification

Classification:
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th></th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

Label Elements:

Signal Word:
Danger

Hazard Statements:
Harmful if swallowed
Causes serious eye damage
Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection

Eyes
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

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>557-34-6</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation
Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms and effects
None reasonably foreseeable. Causes severe eye damage.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media

Unsuitable Extinguishing Media
No information available

Flash Point
No information available

Method -
No information available
Zinc acetate

Autoignition Temperature
Not applicable

Explosion Limits

Upper
No data available

Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products
zinc

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

\begin{tabular}{|c|c|c|c|}
\hline
Health & Flammability & Instability & Physical hazards \\
\hline
3 & 1 & 1 & N/A \\
\hline
\end{tabular}

6. Accidental release measures

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental Precautions
Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling
Ensure adequate ventilation. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage
Store under an inert atmosphere. Keep container tightly closed in a dry and well-ventilated place. Protect from moisture.

8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Long sleeved clothing.

Respiratory Protection
No protective equipment is needed under normal use conditions.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Powder Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>vinegar-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>83 - 86 °C / 181.4 - 186.8 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
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<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
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<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C4 H6 O4 Zn</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>183.48</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Hygroscopic.

Conditions to Avoid
Incompatible products. Exposure to moist air or water. Avoid dust formation.

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
zinc

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>LD50 = 663 mg/kg (Rat)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
Risk of serious damage to eyes

Sensitization
No information available

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>557-34-6</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Mutagenic Effects**
No information available

**Reproductive Effects**
No information available.

**Developmental Effects**
No information available.

**Teratogenicity**
No information available.

**STOT - single exposure**
None known

**STOT - repeated exposure**
None known

**Aspiration hazard**
No information available

**Symptoms / effects, both acute and delayed**
No information available

**Endocrine Disruptor Information**
No information available

**Other Adverse Effects**
The toxicological properties have not been fully investigated.

### 12. Ecological information

**Ecotoxicity**
The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

**Persistence and Degradability**
May persist

**Bioaccumulation / Accumulation**
No information available.

**Mobility**
No information available.

### 13. Disposal considerations

**Waste Disposal Methods**
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

**DOT**
- **UN-No**: UN3077
- **Proper Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- **Proper technical name**: Zinc acetate
- **Hazard Class**: 9
- **Packing Group**: III

**TDG**
- **UN-No**: UN3077
- **Proper Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- **Hazard Class**: 9
- **Packing Group**: III

**IATA**
- **UN-No**: UN3077
- **Proper Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- **Hazard Class**: 9
- **Packing Group**: III

**IMDG/IMO**
- **UN-No**: UN3077
- **Proper Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
All of the components in the product are on the following Inventory lists: X = listed

### International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>209-170-2</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-35519</td>
</tr>
</tbody>
</table>

Legend:
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

#### TSCA 12(b)
Not applicable

#### SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>557-34-6</td>
<td>&gt;95</td>
<td>1.0</td>
</tr>
</tbody>
</table>

#### SARA 311/312 Hazard Categories
See section 2 for more information

#### CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>X</td>
<td>1000 lb</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Clean Air Act
Not applicable

#### OSHA
Occupational Safety and Health Administration
Not applicable

#### CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>1000 lb</td>
<td>-</td>
</tr>
</tbody>
</table>

#### California Proposition 65
This product does not contain any Proposition 65 chemicals

#### U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc acetate</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Zinc acetate

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant  N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 26-Sep-2009
Revision Date 11-Apr-2019
Print Date 11-Apr-2019
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS