SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1. Identification
Product identifier
Product number  108802
Product name  Zinc acetate dihydrate for analysis EMSURE® ACS
CAS-No.  5970-45-6

Relevant identified uses of the substance or mixture and uses advised against
Identified uses  Reagent for analysis

Details of the supplier of the safety data sheet
Company  EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)

Emergency telephone  800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification
GHS Classification
Acute toxicity, Category 4, Oral, H302
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling
Hazard pictograms

Signal Word
Warning

Hazard Statements
H302 Harmful if swallowed.

Precautionary Statements
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. Composition/information on ingredients
Formula (CH₃COO)₂Zn * 2 H₂O  C₄H₆O₄Zn * 2 H₂O (Hill)
Molar mass 219.49 g/mol

Hazardous ingredients
Chemical Name (Concentration)
CAS-No.
zinc diacetate dihydrate (>= 90% - <= 100 %)
5970-45-6
Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures
Description of first-aid measures
Inhalation
After inhalation: fresh air.

Skin contact
After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact
After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

Ingestion
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed
irritant effects, Cough, Diarrhea, Vomiting, cardiovascular disorders, Lung edema
The following applies to zinc compounds in general: only slightly absorbable via the gastrointestinal tract. Adstringent effect on mucous membranes. Metal-fume fever after inhalation of large quantities.

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

SECTION 5. Fire-fighting measures
Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture
Not combustible.
Ambient fire may liberate hazardous vapors.

Advice for firefighters
Special protective equipment for fire-fighters
In the event of fire, wear self-contained breathing apparatus.

Further information
Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions
Do not empty into drains.

Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling
Observe label precautions.

Conditions for safe storage, including any incompatibilities
Tightly closed. Dry.
Store at +5°C to +30°C (+14°F to +86°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)
Contains no substances with occupational exposure limit values.

Engineering measures
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Individual protection measures
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.
Hygiene measures
Change contaminated clothing. Application of skin- protective barrier cream recommended. Wash hands after working with substance.

Eye/face protection
Safety glasses

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:
protective clothing

Respiratory protection
required when dusts are generated.
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>solid</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>weakly of acetic acid</td>
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<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
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<tr>
<td>pH</td>
<td>6 - 7</td>
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<tr>
<td></td>
<td>at 50 g/l</td>
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<tr>
<td></td>
<td>68 °F (20 °C)</td>
</tr>
<tr>
<td>Melting point</td>
<td>237 °C</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
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<tr>
<td>Evaporation rate</td>
<td>No information available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available.</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available.</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
Density 1.74 g/cm³
at 68 °F (20 °C)

Relative density No information available.

Water solubility 430 g/l
at 68 °F (20 °C)

Partition coefficient: n-octanol/water No information available.

Autoignition temperature No information available.

Decomposition temperature > 212 °F (> 100 °C)
Elimination of water of crystallization

Viscosity, dynamic No information available.

Explosive properties Not classified as explosive.

Oxidizing properties none

Bulk density ca.900 kg/m³

SECTION 10. Stability and reactivity

Reactivity See below

Chemical stability releases water of crystallization when heated.

Possibility of hazardous reactions no information available

Conditions to avoid Strong heating (decomposition).

Incompatible materials no information available

Hazardous decomposition products no information available

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact, Ingestion
Acute oral toxicity
LD50 Rat: 794 mg/kg (RTECS)

Absorption

Acute inhalation toxicity

Symptoms: Irritations of mucous membranes, Cough, Lung edema
Eye irritation
Rabbit
Result: slight irritation
(RTECS)
Genotoxicity in vitro
Ames test
Salmonella typhimurium
Result: negative
(Lit.)
Mutagenicity (mammal cell test): chromosome aberration.
Result: positive
(Lit.)
Specific target organ systemic toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.
Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard
Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information
After absorption:
Systemic effects:
Diarrhea, Vomiting, cardiovascular disorders
The following applies to zinc compounds in general: only slightly absorbable via the gastrointestinal tract. Adstringent effect on mucous membranes. Metal-fume fever after inhalation of large quantities.
Other dangerous properties cannot be excluded.
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity
No information available.

Persistence and degradability
No information available.

Bioaccumulative potential
No information available.

Mobility in soil
No information available.

Additional ecological information
Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)
UN number UN 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC ACETATE)
Class 9
Packing group III
Environmentally hazardous --

Air transport (IATA)
UN number UN 3077
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC ACETATE)
Class 9
Packing group III
Environmentally hazardous --
Special precautions for user no

Sea transport (IMDG)
SAFETY DATA SHEET  
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)  

Product number 108802 Version 1.3  
Product name Zinc acetate dihydrate for analysis EMSURE® ACS  

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN 3077</th>
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<tr>
<td>Proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC ACETATE)</td>
</tr>
<tr>
<td>Class</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
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<tr>
<td>Environmentally hazardous</td>
<td>--</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>yes</td>
</tr>
<tr>
<td>EmS</td>
<td>F-A S-F</td>
</tr>
<tr>
<td>Segregation Group</td>
<td>0007 Heavy Metals and their salts (incl. their organometallic compounds)</td>
</tr>
</tbody>
</table>

SECTION 15. Regulatory information  
United States of America  
SARA 313  
The following components are subject to reporting levels established by SARA Title III, Section 313:  
Ingredients  
zinc diacetate dihydrate 5970-45-6 100 %

SARA 302  
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act  
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:  
Ingredients  
zinc diacetate dihydrate

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:  
Ingredients  
zinc diacetate dihydrate

DEA List I  
Not listed

DEA List II  
Not listed

US State Regulations  
Massachusetts Right To Know  
Ingredients  
zinc diacetate dihydrate

Pennsylvania Right To Know  
Ingredients  
zinc diacetate dihydrate

New Jersey Right To Know  
Ingredients  
zinc diacetate dihydrate

California Prop 65 Components  
This product does not contain any chemicals known to the State of California to cause cancer,
birth, or any other reproductive defects.

**Notification status**

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

KOREA: Not in compliance with the inventory.

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**SECTION 16. Other information**

**Training advice**
Provide adequate information, instruction and training for operators.

**Labeling**

*Hazard pictograms*

![Hazard Pictograms]

**Signal Word**
Warning

**Hazard Statements**
H302 Harmful if swallowed.
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**
Prevention
P273 Avoid release to the environment.

**Full text of H-Statements referred to under sections 2 and 3.**

H302 Harmful if swallowed.

**Key or legend to abbreviations and acronyms used in the safety data sheet**
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

**Revision Date** 02/03/2015

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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