

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date

26.03.2010

1. Identification of the substance/mixture and of the company/undertaking

Product Information

Catalogue No.: 108802
Product name: Zinc acetate dihydrate for analysis EMSURE®
Use of the Substance/Mixture: Reagent for analysis, Chemical production
Company: Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Emergency telephone: Please contact the regional Merck representation in your country.
Responsible/issuing person: EQ-EPS * e-mail: prodsafe@merck.de

2. Hazards identification

GHS Classification

Acute toxicity, Category 4, Oral H302: Harmful if swallowed.
Acute aquatic toxicity, Category 1 H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1 H410: Very toxic to aquatic life with long lasting effects.

EC Classification

Xn; R22

N; R50/53

For the full text of the R-phrases mentioned in this Section, see Section 16.

3. Composition/information on ingredients

Formula	$(\text{CH}_3\text{COO})_2\text{Zn} \cdot 2 \text{H}_2\text{O}$	$\text{C}_4\text{H}_6\text{O}_4\text{Zn} \cdot 2 \text{H}_2\text{O}$ (Hill)
CAS-No.	5970-45-6	
EC-No.	209-170-2	
Molar mass	219,49 g/mol	

4. First aid measures

After inhalation: fresh air.

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

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

After swallowing: immediately make victim drink water (two glasses at the most). Consult a physician.

5. Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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Specific hazards during fire fighting

Not combustible.
Ambient fire may liberate hazardous vapours.

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.

6. Accidental release measures

Personal precautions

Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation.

Environmental precautions

Do not empty into drains.

Methods for cleaning up

Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

7. Handling and storage

Handling

Advice on safe handling

|| Observe label precautions.

Storage

Further information on storage conditions

Tightly closed. Dry.

Without limitations.

8. Exposure controls/personal protection

Personal protective equipment

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the resultant standard EN374, for example. KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Eye protection

Safety glasses

Protective measures

Protective suit

Hygiene measures

Change contaminated clothing. Wash hands and face after working with substance.

9. Physical and chemical properties

Form	solid
Colour	white
Odour	weakly of acetic acid
pH	6 - 7 at 50 g/l 20 °C
Viscosity, dynamic	no data available
Melting point	237 °C
Boiling point/boiling range	not applicable
Ignition temperature	no data available
Flash point	not applicable
Oxidizing properties	no data available
Flammability	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	no data available
Relative vapour density	no data available

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Density	1,74 g/cm ³ at 20 °C
Bulk density	ca.900 kg/m ³
Solubility/qualitative	no data available
Water solubility	430 g/l at 20 °C
Partition coefficient: n- octanol/water	no data available
Evaporation rate	no data available

10. Stability and reactivity

Conditions to avoid

Strong heating.

Materials to avoid

no information available

Hazardous decomposition products

no information available

Thermal decomposition

> 100 °C

Note: Elimination of water of crystallisation

11. Toxicological information

Acute oral toxicity

LD50 rat

Dose: 794 mg/kg

(RTECS)

Symptoms: absorption

Acute inhalation toxicity

Symptoms: Irritations of mucous membranes, Cough

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.)

Further information

After absorption:

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Systemic effects:

Diarrhoea, Vomiting, cardiovascular disorders

After inhalation of vapours:

Lung oedema

Other information

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.

Further data:

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

12. Ecological information

Ecotoxicity

Toxicity to fish

LC50

Species: *Oncorhynchus mykiss* (rainbow trout)

Dose: 0,55 mg/l

Exposure time: 96 h

(anhydrous substance) (ECOTOX Database)

Additional ecological information

Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Product

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

ADR/RID

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC ACETATE), 9, III

IATA

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC ACETATE), 9, III

IMDG

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC ACETATE), 9, III

EmS

F-A S-F

Segregation Group: 0007 Heavy Metals and their salts (incl. their organometallic compounds)

The transport regulations re cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

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15. Regulatory information

GHS-Labeling

Hazard pictograms



Signal word
Warning

Hazard statements

H302: Harmful if swallowed.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements

P262: Do not get in eyes, on skin, or on clothing.
P273: Avoid release to the environment.

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word
Warning

CAS-No. 5970-45-6

Labelling according to EC Directives

Symbol(s):	Xn N	Harmful Dangerous for the environment
R-phrase(s):	22-50/53	Harmful if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s):	24/25-61	Avoid contact with skin and eyes. Avoid release to the environment. Refer to special instructions/ Safety data sheets.

EC-No. 209-170-2

Reduced labelling (≤125 ml)

Symbol(s):	Xn N	Harmful Dangerous for the environment
R-phrase(s):	22	Harmful if swallowed.

National legislation

Storage class VCI: 10 - 13 Other liquids and solids

Major Accident Hazard Legislation: 96/82/EC Update: 2003
Dangerous for the environment
9a
Quantity 1: 100 t
Quantity 2: 200 t

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Water contaminating class (Germany): WGK 3 highly water endangering

Other regulations: Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

16. Other information

Full text of R-phrases referred to under sections 2 and 3

R22 Harmful if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Regional representation: This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.