

SIGMA-ALDRICH**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : (-)-Epinephrine (+)-bitartrate salt

Product Number : E4375

Brand : Sigma

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2. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

Very toxic if swallowed. Irritating to eyes, respiratory system and skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : L-Adrenaline(+)-bitartrate salt
L-3,4-Dihydroxy- α -(methylaminomethyl)benzyl alcohol D-hydrogenbitartrate salt
L-Adrenaline D-hydrogentartrate
L-Epinephrine D-hydrogentartrate

Formula : $C_9H_{13}NO_3 \cdot C_4H_6O_6$

Molecular Weight : 333,29 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
Epinephrine hydrogen tartrate				
51-42-3	200-097-1	-	T+, R28 - R36/37/38	-

4. 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

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

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

Light sensitive. Store under inert gas. Air sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (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).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	solid
Colour	white

Safety data

pH	4 at 20 g/l
Melting point	155 °C
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Bases, Oxidizing agents, Iron and iron salts., Copper

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - mouse - 4 mg/kg

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

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.

Genotoxicity in vitro - mouse - Other cell types
DNA inhibition

Laboratory experiments have shown teratogenic effects.

Reproductive toxicity - mouse - Subcutaneous
Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

Signs and Symptoms of Exposure

Laboratory experiments in animals have shown fetotoxic results., Palpitation, Tremors, Weakness, Headache

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be fatal if swallowed.
Target Organs	Heart, Smooth muscle.,

Additional Information

RTECS: DO3500000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. 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

ADR/RID

UN-Number: 2811 Class: 6.1 Packing group: I
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Epinephrine hydrogen tartrate)

IMDG

UN-Number: 2811 Class: 6.1 Packing group: I EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Epinephrine hydrogen tartrate)
Marine pollutant: No

IATA

UN-Number: 2811 Class: 6.1 Packing group: I
Proper shipping name: Toxic solid, organic n.o.s. (Epinephrine hydrogen tartrate)

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazard symbols

T+ Very toxic

R-phrases(s)

R28 Very toxic if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.

S-phrases(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical

S28
S36/37
S45

advice.

After contact with skin, wash immediately with plenty of soap and water.

Wear suitable protective clothing and gloves.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

16. OTHER INFORMATION

Further information

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