

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

Identification of the product

1,10-Phenanthroline

Manufacturer/supplier identification

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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 3)

Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed.

Precautionary statement(s)

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321	Specific treatment (see on this label).
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Supplemental Hazard Statements

none

3. Composition/information on ingredients

Synonyms

1,10-Phenanthroline

CAS-No.: 5144-89-8

M: 198.22 g/mol

Molecular formula: $C_{12}H_8N_2 \cdot H_2O$

4. First aid measures

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.

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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.

7. Handling and storage**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.

Conditions for safe storage

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

8. Exposure controls and personal protection**Appropriate engineering controls**

General industrial hygiene practice.

Personal protective equipment**Eye/face protection**

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.

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

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under

appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and chemical properties

Form: crystals

Colour: white

Odour: not available

pH value: not available

Melting point: 93~94°C

Boiling point: not available

Ignition temperature: not available

Flash point: not available

Autoignition temperature: not available

Explosion limits

lower: not available

upper: not available

Density : not available

Bulk density: not available

Solubility in

water (20 °C) : not available

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agents. Acids

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information

Acute toxicity

LD50 Oral - Rat - 132 mg/kg

Skin corrosion or irritation

no data available

Serious eye damage or eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

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.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

13. Disposal considerations**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information**ADR/RID**

UN-Number: 2811 Class: 6.1 Packing group: III

Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (1,10-Phenanthroline)

IMDG

UN-Number: 2811 Class: 6.1 Packing group: III

Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (1,10-Phenanthroline)

Marine pollutant: no

IATA

UN-Number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (1,10-Phenanthroline)

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. Other information

General update.

Regional representation:

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