

SAFETY DATA SHEET

1,10-PHENANTHROLINE MONOHYDRATE AR

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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Catalogue no. : KA365
Product name : 1,10-Phenanthroline monohydrate AR
CAS No : 5144-89-8
EC No. : 200-629-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

For laboratory utilisation, analysis, research and fine chemistry.

Uses advised against

No additional information available

1.3 Details of the supplier of the safety data sheet

Elago Enterprises Pty Ltd
5 The Cloisters, Cherrybrook, N.S.W. 2126, Australia
Tel no. (61) 2 98998169 Fax no. (61) 2 98997976
info@kemauschemical.com

1.4 Emergency telephone:

(61) 2 98998169 (9:00am - 5:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation GHS

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity, oral (Category 3), H301 : Toxic if swallowed.

Hazardous to the aquatic environment, Long-term (chronic), (Category 1) ; H410 : Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation GHS

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Pictogram (s)



Skull and crossbones (GHS06) Environment (GHS09)

Signal word

Danger

Hazard statements

H301 Toxic if swallowed.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P391 Collect spillage.

2.3 Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name: 1,10-Phenanthroline monohydrate

Formular: $C_{12}H_8N_2 \cdot H_2O$

CAS No : 5144-89-8

Molecular weight : 198.23

Concentration : $\leq 100\%$ (weight)

Contains no other components or impurities which will influence the classification of the product.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled

After inhalation: Take the person out into the fresh air.

In case of skin contact

In case of skin contact: Wash with plenty of water. Remove contaminated clothing.

In case of eye contact

After eye contact: Wash with plenty of water, keeping eyelids open.

If swallowed

After swallowing: Never induce vomiting. Rinse mouth thoroughly with water. If feeling unwell seek medical assistance.

4.2 Most important symptoms and effects, both acute and delayed

Toxic Product, if contact may result in serious respiratory difficulties, alteration of the central nervous system and in extreme cases, unconsciousness. Immediate medical assistance is required.

4.3 Indication of any immediate medical attention and special treatment needed

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, Dry powder, Carbon dioxide, Water spray, Sand.

Unsuitable extinguishing media

Do not use a direct stream of water to extinguish.

5.2 Special hazards arising from the substance or mixture

Under fire conditions, hazardous fumes may present.

5.3 Advice for firefighters

Do not enter fire area without proper protective equipment, including respiratory protection.

Fire protection equipment: According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and gloves.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Do not breathe vapors or dusts. Evacuate the danger area.

For emergency responders

For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions

Product dangerous for the environment, do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

6.3 Methods and material for containment and cleaning up

The contaminated area should be immediately cleaned with an appropriate de-contaminator. Store away from other materials. Collect spillage.

6.4 Reference to other sections

For later elimination of waste, follow the recommendations under section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

The product does not require special handling measures. Ensure good ventilation and renewal of the air in the premises. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

The product does not require special storage measures. Well sealed containers. Away from sources of ignition and heat.

7.3 Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

The product does NOT contain substances with Professional Exposure Environmental Limit Values.

The product does NOT contain substances with Biological Limit Values.

8.2 Exposure controls

Personal protection equipment

Eye/face protection

Wear suitable eye equipment protection. Recommended DIN EN 166 and Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Wear suitable protective clothing, Recommended EN 374 and Must comply with Australian Standards AS 2161. Wear appropriate clothing.

Respiratory protection

Wear approved mask. Must comply with Australian Standards 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Solid.
Colour:	White to off-white crystals.
Odour:	Odourless
Odour threshold:	No data available.
pH value:	No data available
Melting Point:	94 °C
Boiling Point:	No data available
Flash point:	No data available
Flammability (solid, gas) :	No data available
Evaporation rate :	No data available
Vapour pressure:	No data available
Vapour density :	No data available
Lower Explosive Limit:	No data available
Upper Explosive Limit:	No data available
Solubility:	3.3 g/l (20 °C)
Density:	No data available
Relative density:	No data available
Log Pow octanol / water at 20°C	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

9.2 Other information

None.

SECTION 10: Stability and reactivity

10.1 Reactivity

The product does not present hazards by their reactivity.

10.2 Chemical stability

Stable under the recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

The product does not present possibility of hazardous reactions.

10.4 Conditions to avoid

Avoid heating And any improper handling.

10.5 Incompatible materials

Keep away from strong oxidizing agents, strong acids and strong alkalis.

10.6 Hazardous decomposition products

Depending on conditions of use, can be generated corrosive vapors or gases.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute toxicity oral Toxic if swallowed.

LD50 oral rat : 132 mg/kg

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitisation

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

STOT-single exposure

No information available.

STOT-repeated exposure

No information available.

Aspiration hazard

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

No data available.

Toxicity to daphnia and other aquatic invertebrates

No data available.

Toxicity to algae

No data available.

12.2 Persistence and degradability

Biodegradable.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

14.1 UN number

UN 2811

14.2 UN proper shipping name

Land transport (ADR/RID)

TOXIC SOLID, ORGANIC, N.O.S. (1,10-Phenanthroline monohydrate)

Sea transport (IMDG)

TOXIC SOLID, ORGANIC, N.O.S. (1,10-Phenanthroline monohydrate)

Air transport (IATA)

Toxic solid, organic, n.o.s. (1,10-Phenanthroline monohydrate)

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es) : 6.1

Classification code : T2

Hazard identification number (Kemler No.) : 60

Tunnel restriction code : E

Special provisions : LQ 5 kg · E1

Sea transport (IMDG)

Class(es) : 6.1

EmS-No. : F-A / S-A

Special provisions : LQ 5 kg · E1

Air transport (IATA)

Class(es) : 6.1

Special provisions : E1

14.4 Packing group.

Land transport (ADR/RID)

III

Sea transport (IMDG)

III

Air transport (IATA)

III

14.5 Environmental hazards

Land transport (ADR/RID)

Yes

Sea transport (IMDG)

Yes

Air transport (IATA)

Yes

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Ensure all national/local regulations are observed.

Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia.

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Edition.

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019.

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)

15.2 Chemical safety assessment

No information available.

SECTION 16: Other information

16.1 Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

EC50: Effective concentration, 50%

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IC50: Inhibitory Concentration, 50%

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Log Pow: Logarithm of the partition octanol-water

NOEC: No Observed Effect Concentration

PBT: persistent, bioaccumulative and toxic

vPvB: very Persistent and very Bioaccumulative

STEL: Short term exposure limit

TWA: Time Weighted Average

16.2 Further information.

None.

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