

SAFETY DATA SHEET

Issue Date 14-Nov-2025
Revision Number 2.04

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

Product identifier**Product Name** 4,7-Diphenyl-1,10-phenanthroline**Other means of identification****Product Code(s)** 029-00491,025-00493**Recommended use of the chemical and restrictions on use****Recommended Use** For research use only.**Uses advised against** Seek expert judgment when using for purposes other than those recommended.**Details of the supplier of the safety data sheet****Manufacturer Address**

FUJIFILM Wako Pure Chemical Corporation

1-2, Doshomachi 3-Chome,

Chuo-ku Osaka 540-8605, Japan

Tel : +81-6-6203-3741

Fax: +81-6-6201-5964

Distributor

FUJIFILM Irvine Scientific

E. Warner Avenue, Santa Ana, CA 92705-5505, U.S.A.: +1 949 261 7800

Fax: +1 949 261 6522

2. HAZARDS IDENTIFICATION

GHS classification**Classification of the substance or mixture**

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Pictograms**Signal word** None**Hazard statements**

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Precautionary statements-(Prevention)

Not applicable

Precautionary statements-(Response)

Not applicable

Precautionary statements-(Storage)

Not applicable

Precautionary statements-(Disposal)

Not applicable

Others**Other hazards** Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance**Formula** (C₆H₅)₂C₁₂H₆N₂

Chemical Name	Molecular weight	CAS RN	Weight-%
4,7-Diphenyl-1,10-phenanthroline	332.40	1662-01-7	=<100

Impurities and/or Additives: Not applicable

4. FIRST AID MEASURES

First aid measures

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Inhalation	Remove to fresh air.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms	No information available.
----------	---------------------------

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
--------------------	------------------------

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing media

Water spray (fog). Carbon dioxide (CO₂). Foam. Extinguishing powder. Sand.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data

Sensitivity to Mechanical Impact none.

Sensitivity to Static Discharge none.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation, especially in confined areas.
---	--

Environmental precautions

Environmental precautions	See Section 12 for additional ecological information.
---------------------------	---

Methods and material for containment and cleaning up

Methods and material for containment and cleaning up	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures	Avoid contact with strong oxidizing agents.
Protective measures	Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage conditions	Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.
Packaging materials	Glass.
Incompatible materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering controls**

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits	Not applicable
-----------------	----------------

Personal protective equipment

Respiratory protection	Dust mask (JIS T 8151)
Hand protection	chemical protective gloves (JIS T 8116)
Eye protection	protective eyeglasses or chemical safety goggles (JIS T 8147)
Skin and body protection	Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	
Color	White - pale brown
Appearance	crystalline powder - powder
Odor	no data available
pH	no data available
Melting point/freezing point	218-222 °C
Boiling point, initial boiling point and boiling range	no data available
Flash point	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	
Upper:	no data available
Lower:	no data available
Vapour pressure	no data available
Vapour density	no data available
Specific Gravity / Relative density	no data available
Solubilities	Ethanol : slightly soluble . water : practically insoluble,or insoluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Particle characteristics	no data available

10. STABILITY AND REACTIVITY**Stability**

Chemical stability May be altered by light.
Reactivity no data available

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x)

11. TOXICOLOGICAL INFORMATION

Acute toxicity no data available

Skin irritation/corrosion no data available
Serious eye damage/ irritation no data available
Respiratory or skin sensitization no data available
Reproductive cell mutagenicity no data available
Carcinogenicity no data available

Reproductive toxicity no data available
STOT-single exposure no data available
STOT-repeated exposure no data available
Aspiration hazard no data available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

no data available

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility

no data available

Mobility in soil

No information available

Other Data

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Precautionary including method of Disposal should be in accordance with applicable regional, national and local laws and

disposing contaminated packaging regulations.

14. TRANSPORT INFORMATION

DOT	Not regulated
UN/ID No	Not applicable
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Marine pollutant	Not applicable
IATA	Not regulated
UN/ID No	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Environmentally Hazardous Substance	Not applicable
IMDG	Not regulated
UN/ID No	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Marine pollutant (Sea)	Not applicable

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS RN	Weight-%	SARA 313 - Threshold Values %
4,7-Diphenyl-1,10-phenanthroline - 1662-01-7	1662-01-7	=<100	N/A

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any chemicals regulated by Proposition 65

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

Issue Date

14-Nov-2025

Revision Note

No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet