

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH)

Revision Date 01-Nov-2019

Version 1.02

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Product Name (1R,2R)-(-)-1,2-Cyclohexanediamine
Product Code 044-21421,042-21422
CAS RN 20439-47-8
Pure substance/mixture Substance

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

Recommended Use For research purposes.
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet**Manufacturer**

FUJIFILM Wako Pure Chemical Corporation
1-2 Doshomachi 3-Chome
Chuo-ku, Osaka 540-8605, Japan
Phone: +81 (0)6-6203-3741
Fax: +81 (0)6-6203-4640

Supplier

FUJIFILM Wako Chemicals GmbH
Fuggerstrasse 12, D-41468 Neuss, Germany
Phone: +49 (0)2131-311 158 Fax: +49 (0)2131-311 100
FUJIFILM Wako Chemicals USA, Inc.
1600 Bellwood Road, Richmond, VA 23237-1326, U.S.A.
Phone: +1 (0)804-271-7677 Fax: +1 (0)804-271-7791

For further information, please contact us.

1.4. Emergency telephone number

As above or toxicological information center
Emergency telephone +81-6-6203-3741

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

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

Skin corrosion/irritation

Category 1 B

2.2. Label elements

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

Pictograms

Signal word Danger

Hazard Statements

H314 - Causes severe skin burns and eye damage

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P310 - Immediately call a POISON CENTER or doctor/physician

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

2.3. Other hazards

General Hazards No information available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical Name	EC No	CAS RN	Index No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(1R,2R)-(-)-1,2-Diaminocyclohexane	N/A	20439-47-8	N/A	99.0	Skin Corr. 1B: H314

3.3 Additional information

Impurities and/or Additives : Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.
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.
Symptoms	No information available.
Note to physicians	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol resistant foam.
Unsuitable Extinguishing media	No information available

5.2. Special hazards arising from the substance or mixture Thermal decomposition can lead to release of irritating and toxic gases and vapors.

5.3. Advice for firefighters

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

5.4. Additional information No information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures	For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions Environmental precautions	To be careful not discharged to the environment without being properly handled waste water contaminated. See Section 12 for additional ecological information.
6.3. Methods and material for containment and cleaning up	Sweep up and gather scattered particles, and collect it in an empty airtight container.
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.
6.4. Reference to other sections	See Section 12: Ecological Information, Section 13 : Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling Protective measures	Ensure adequate ventilation, especially in confined areas. Avoid contact with strong oxidizing agents. Handle in accordance with good industrial hygiene and safety practice.
7.2. Conditions for safe storage, including any incompatibilities Storage conditions Packaging materials	Container protected from light, and store tightly closed in freezer (-20°C). Glass.
7.3. Specific end use(s) Risk Management Methods (RMM)	No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters Exposure limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
8.2. Exposure controls Engineering controls Personal protective equipment Eye/face protection Hand protection Skin and body protection Respiratory protection Environmental exposure controls	Ensure adequate ventilation, especially in confined areas. Tight sealing safety goggles. Impermeable protective gloves. Suitable protective clothing. Dust mask. No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance Color Appearance	White - slightly yellow crystals or mass
Odor	characteristic odor
pH pH value	basic (aq.)
Melting point / melting range	41-45 °C
Boiling point/boiling range	No data available
Flash point	69 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Flammability Limits in Air Upper Lower	No data available No data available
Vapor pressure	No data available
Vapor density	No data available
Specific Gravity / Density	No data available
Solubility(ies)	water , Ethanol , ether : freely soluble .
Partition Coefficient (n-octanol/water)	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available

Dynamic viscosity No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity No data available

10.2. Chemical stability

May be altered by light.

Explosion data

Sensitivity to Mechanical Impact none.

Sensitivity to Static Discharge none.

10.3. Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid Extremes of temperature and direct sunlight.

10.5. Incompatible materials Strong oxidizing agents.

10.6. Hazardous decomposition products Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity No information available

Skin corrosion/irritation Causes severe skin burns.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization 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.

CMR Effects No information available

To the best of our knowledge, chemical, physical and toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1. Toxicity No information available

12.2. Persistence and degradability No information available.

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. Other adverse effects No information available

To the best of our knowledge, chemical, physical and toxicological properties have not been fully investigated.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Method of disposing waste from residues / unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Precautionary including method of disposing contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal.

SECTION 14: Transport information**IMDG**

14.1 UN/ID No	UN3259
14.2 Proper shipping name	Amines, solid, corrosive, n.o.s. ((1R,2R)-(-)-1,2-Diaminocyclohexane)
14.3 Hazard class	8
14.4 Packing group	II
14.5 Marine pollutant	Not applicable
14.6 Special provisions	Not regulated
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

IATA

14.1 UN/ID No	UN3259
14.2 Proper shipping name	Amines, solid, corrosive, n.o.s. ((1R,2R)-(-)-1,2-Diaminocyclohexane)
14.3 Hazard class	8
14.4 Packing group	II
14.5 Marine pollutant	Not applicable
14.6 Special provisions	Not regulated

ADR/RID

14.1 UN/ID No	UN3259
14.2 Proper shipping name	Amines, solid, corrosive, n.o.s. ((1R,2R)-(-)-1,2-Diaminocyclohexane)
14.3 Hazard class	8
14.4 Packing group	II
14.5 Marine pollutant	Not applicable
14.6 Special provisions	Not regulated
Classification code	C7

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Water hazard class (WGK) No information available

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

TSCA	-
EINECS/ELINCS	-
DSL	-
NDSL	-
ENCS	Listed

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

Revision Date 01-Nov-2019

Key or legend to abbreviations and acronyms used in the safety data sheet

No information available

Disclaimer

The information provided in this Material 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.

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

End of Safety Data Sheet