SAFETY DATA SHEET

Issue Date 16-May-2025
Revision Number 3.06

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

Product identifier
Product Name Palladium-Activated Carbon Ethylenediamine Complex (Pd 3.5~6.5%)
Other means of identification
Product Code(s) 163-21441,169-21443,161-21442

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
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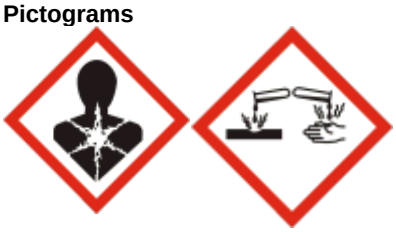
Distributor
FUJIFILM Irvine Scientific
E. Warner Avenue, Santa Ana, CA 92705-5505, U.S.A.: +1 949 261 7800
Fax: +1 949 261 6522

2. HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 1
Category 1 respiratory system	
Specific target organ toxicity (repeated exposure)	Category 2
Category 2 liver, kidneys, Visual organ	
Acute aquatic toxicity	Category 3

Pictograms



Signal word Danger

Hazard statements
H315 - Causes skin irritation
H318 - Causes serious eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H361 - Suspected of damaging fertility or the unborn child
H317 - May cause an allergic skin reaction
H402 - Harmful to aquatic life
H370 - Causes damage to the following organs: respiratory system
H373 - May cause damage to the following organs through prolonged or repeated exposure: liver, kidneys, Visual organ

Precautionary statements-(Prevention)

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required Wash face, hands and any exposed skin thoroughly after handling In case of inadequate ventilation wear respiratory protection Contaminated work clothing should not be allowed out of the workplace Wear protective gloves Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product Avoid release to the environment

Precautionary statements-(Response)

IF exposed: Call a POISON CENTER or doctor/physician

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

IF ON SKIN: Wash with plenty of soap and water Take off contaminated clothing and wash before reuse If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Precautionary statements-(Storage)

Store locked up

Precautionary statements-(Disposal)

Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Substance

Chemical Name	Molecular weight	CAS RN	Weight-%
Palladium-Activated Carbon Ethylenediamine Complex	N/A	N/A-16-2144-1	97-100
Ethylenediamine	60.10	107-15-3	1.0-3.0

Impurities and/or Additives： Impurities : Ethylenediamine

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. Packed with an inert gas.

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

Chemical Name	ACGIH	OSHA PEL	NIOSH IDLH
Ethylenediamine 107-15-3	TWA: 10 ppm Skin	TWA: 10 ppm TWA: 25 mg/m^3 (vacated) TWA: 10 ppm	IDLH: 1000 ppm TWA: 10 ppm TWA: 25 mg/m^3

		(vacated) TWA: 25 mg/m^3	

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	black
Appearance	powder
Odor	no data available
pH	no data available
Melting point/freezing point	no data available
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	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, Moisture

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monooxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Metal oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylenediamine	637 mg/kg (Rat)	560 mg/kg (Rabbit)	5656 ppm (Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Ethylenediamine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
Ethylenediamine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Ethylenediamine	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Ethylenediamine	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Ethylenediamine	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagencity source information
Ethylenediamine	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Ethylenediamine	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Ethylenediamine	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Ethylenediamine	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Ethylenediamine	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Ethylenediamine	Based on the NITE GHS classification results.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethylenediamine 107-15-3	EC50 : Pseudokirchneriella subcapitata 151 mg/L 96 h EC50 : Pseudokirchneriella subcapitata 645 mg/L 72 h	LC50 : Pimephales promelas 115.7 mg/L 96 h	N/A	EC50 : Daphnia magna 3.0 mg/L 48 h

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility

Chemical Name	Partition coefficient
Ethylenediamine 107-15-3	-1.221

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 disposing contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT Not regulated
UN/ID No Not applicable
Proper shipping name:
UN classfication
Subsidiary hazard class
Packing group
Marine pollutant Not applicable

IATA Not regulated
UN/ID No -
Proper shipping name:
UN classfication
Subsidiary hazard class
Packing group
Environmentally Hazardous Substance Not applicable

IMDG Not regulated
UN/ID No -
Proper shipping name:
UN classfication
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 %

Palladium-Activated Carbon Ethylenediamine Complex - N/A-16-2144-1	N/A-16-2144-1	97-100	N/A
Ethylenediamine - 107-15-3	107-15-3	1.0-3.0	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 contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ethylenediamine 107-15-3	5000 lb	N/A	N/A	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylenediamine 107-15-3	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any chemicals regulated by Proposition 65

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Ethylenediamine 107-15-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

Issue Date 09-May-2025
Issue Date 16-May-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