

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
**Revision date** 10-Oct-2023  
 Revision Number 1.05

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Diphenyl Diselenide
<b>Product Code</b>	043-34181,041-34182

**Supplier** FUJIFILM Wako Pure Chemical Corporation  
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan  
 Phone: +81-6-6203-3741  
 Fax: +81-6-6203-2029

**Emergency telephone number** +81-6-6203-3741 / +81-3-3270-8571

**Recommended uses** For research use only

**Restrictions on use** Seek expert judgment when using for purposes other than those recommended.

## Section 2: HAZARDS IDENTIFICATION

## GHS classification

## Classification of the substance or mixture

Acute toxicity - Oral

Category 3

Acute toxicity - Inhalation (Dusts/Mists)

Category 3

Specific target organ toxicity (repeated exposure)

Category 2

Acute aquatic toxicity

Category 1

Chronic aquatic toxicity

Category 1

## Pictograms



## Signal word

Danger

## Hazard statements

H301 - Toxic if swallowed

H331 - Toxic if inhaled

H373 - May cause damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

## Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Avoid release to the environment

## Precautionary statements-(Response)

- Get medical advice/attention if you feel unwell
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Rinse mouth
- Collect spillage

**Precautionary statements-(Storage)**

- Store locked up
- Store in a well-ventilated place. Keep container tightly closed

**Precautionary statements-(Disposal)**

- Dispose of contents/container to an approved waste disposal plant

**Others**

**Other hazards** Not available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture** Substance

**Formula** C<sub>12</sub>H<sub>10</sub>Se<sub>2</sub>

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Diphenyl diselenide	97.0	312.13	N/A	N/A	1666-13-3

**Note on ISHL No.:** \* in the table means announced chemical substances.

**Impurities and/or Additives:** Not applicable

### Section 4: 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. If symptoms persist, call a physician.

**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.

**Protection of first-aiders**

Use personal protective equipment as required.

### Section 5: FIRE FIGHTING MEASURES

**Suitable extinguishing media**

Water spray (fog), Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder, Sand

**Unsuitable extinguishing media**

No information available

**Specific hazards arising from the chemical product**

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

**Special extinguishing method**

No information available

**Special protective actions for****fire-fighters**

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

### Section 6: ACCIDENTAL RELEASE MEASURES

**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.

**Environmental precautions**

To be careful not discharged to the environment without being properly handled waste water contaminated.

**Methods and materials for contaminant and methods and materials for cleaning up**

Sweep up and gather scattered particles, and collect it in an empty airtight container.

**Recovery, neutralization**

No information available

**Secondary disaster prevention measures**

Clean contaminated objects and areas thoroughly observing environmental regulations.

## Section 7: HANDLING AND STORAGE

**Handling****Technical measures**

Avoid contact with strong oxidizing agents. Use with local exhaust ventilation.

**Precautions**

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

**Safety handling precautions**

Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

**Storage****Safe storage conditions****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. Store locked up.

**Safe packaging material**

Glass

**Incompatible substances**

Strong oxidizing agents

## Section 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	JSOH (Japan)	ISHL (Japan)	ACGIH
Diphenyl diselenide 1666-13-3	TWA: 0.1 mg/m <sup>3</sup> OEL	N/A	TWA: 0.2 mg/m <sup>3</sup> Se

**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

**Skin and body protection**

Long-sleeved work clothes

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Form****Color**

Pale yellow - yellowish brown

**Appearance**

crystals - powder or mass

**Odor**

no data available

**Melting point/freezing point**

61 - 63 °C

**Boiling point, initial boiling point and boiling range**

no data available

**Flammability**

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
Flash point	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	toluene : soluble . water : slightly soluble .
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	no data available
Vapour density	no data available
Particle characteristics	no data available

## Section 10: STABILITY AND REACTIVITY

### Stability

Reactivity	no data available
Chemical stability	May be altered by light.
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 (CO <sub>2</sub> ), Metal oxides	

## Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity	no data available
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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	

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Diphenyl diselenide 1666-13-3		Group 3		

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

## Section 12: ECOLOGICAL INFORMATION

Ecotoxicity	No information available
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Other data	no data available
Persistence and degradability	No information available
Bioaccumulative potential	No information available
Mobility in soil	No information available
Hazard to the ozone layer	No information available

### Section 13: DISPOSAL CONSIDERATIONS

#### Waste from residues

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

#### Contaminated container and contaminated packaging

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

### Section 14: TRANSPORT INFORMATION

#### ADR/RID

UN number	UN3283
Proper shipping name:	Selenium compound, solid, n.o.s. (Diphenyl Diselenide)
UN classification	6.1
Subsidiary hazard class	
Packing group	III
Marine pollutant	Yes

#### IMDG

UN number	UN3283
Proper shipping name:	Selenium compound, solid, n.o.s. (Diphenyl Diselenide)
UN classification	6.1
Subsidiary hazard class	
Packing group	III
Marine pollutant (Sea)	Yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

#### IATA

UN number	UN3283
Proper shipping name:	Selenium compound, solid, n.o.s. (Diphenyl Diselenide)
UN classification	6.1
Subsidiary hazard class	
Packing group	III
Environmentally Hazardous Substance	Yes

### Section 15: REGULATORY INFORMATION

#### Japanese regulations

Fire Service Act	Not applicable
Poisonous and Deleterious Substances Control Law	Poisonous Substances 1st. Grade
Industrial Safety and Health Act	Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.333 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
Regulations for the carriage and storage of dangerous goods in ship	Toxic Substances - Poison (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law	Toxic and Infectious Substances (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
Pollutant Release and Transfer Register Law	Class 1

(2023.4.1-)

**Class 1 - No.  
Water Pollution Control Act**

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Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinance Designating Wastewater Standards Art.1)

**Export Trade Control Order  
Air Pollution Control Law  
Soil Contamination Control  
Law**

Not applicable

Hazardous Air Pollutants

Designated Hazardous Substances

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2)	Pollutant Release and Transfer Register Law (2023.4.1-)
Diphenyl diselenide 1666-13-3 ( 97.0 )	Applicable	Applicable	Applicable

## Section 16: OTHER INFORMATION

### Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)

<http://www.safe.nite.go.jp/japan/db.html>

IATA dangerous Goods Regulations

RTECS:Registry of Toxic Effects of Chemical Substances

Japan Industrial Safety and Health Association GHS Model SDS

Dictionary of Synthetic Organic Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.

Chemical Dictionary, Kyouritsu Publishing Co., Ltd.

etc

### Disclaimer

This SDS is according to JIS Z 7253: 2019. 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, 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.

GHS Classification is according to JIS Z 7252:2019. \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**