

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
Issue Date 28-Feb-2025  
Revision Number 2.05

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Mercury(II) Oxide, Red
Product Code	132-01292

**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 2
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 1
Category 1 central nervous system, Peripheral Nervous System, kidneys, Digestive tract	
Specific target organ toxicity (repeated exposure)	Category 1
Category 1 central nervous system, kidneys	

## Pictograms



## Signal word

Danger

## Hazard statements

- H315 - Causes skin irritation
- H319 - Causes serious eye irritation
- H300 - Fatal if swallowed
- H311 - Toxic in contact with skin
- H360 - May damage fertility or the unborn child
- H317 - May cause an allergic skin reaction
- H370 - Causes damage to the following organs: central nervous system, Peripheral Nervous System, kidneys, Digestive tract
- H372 - Causes damage to the following organs through prolonged or repeated exposure: central nervous system, kidneys

## 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
- Do not eat, drink or smoke when using this product
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Do not breathe dust/fume/gas/mist/vapors/spray

**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
- If eye irritation persists: Get medical advice/attention
- IF ON SKIN: Wash with plenty of soap and water
- Call a POISON CENTER or doctor/physician if you feel unwell
- Remove/Take off immediately all contaminated clothing
- Wash contaminated clothing before reuse
- If skin irritation or rash occurs: Get medical advice/attention
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Rinse mouth

**Precautionary statements-(Storage)**

- Store locked up

**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** HgO

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Mercury(II) oxide	98.0	216.59	(1)-436	*	21908-53-2

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

### 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**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

**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 reducing 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**

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

**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. Store locked up.

**Safe packaging material**

Glass

**Incompatible substances**

Reducing agent, Chlorine, Hydrogen peroxide, Magnesium, Sulfur subchloride, phosphorus

## 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
Mercury(II) oxide	ISHL/ACL: 0.025 mg/m <sup>3</sup>	ISHL/ACL: 0.025 mg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup> Hg

21908-53-2

Skin

**Personal protective equipment**

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

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

**Form**

**Color** reddish yellow - yellowish red

**Appearance** powder

**Odor** no data available

**Melting point/freezing point** 500 °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** dil. hydrochloric acid or pale nitric acid : soluble . water and Ethanol : practically insoluble, or insoluble .

**n-Octanol/water partition coefficient:(log Pow)** no data available

**Vapour pressure** no data available

**Specific Gravity / Relative density** 11.1

**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**

The substance decomposes on burning producing toxic or corrosive gases and fumes.

**Conditions to avoid**

Extremes of temperature and direct sunlight

**Incompatible materials**

Reducing agent, Chlorine, Hydrogen peroxide, Magnesium, Sulfur subchloride, phosphorus

**Hazardous decomposition products**

## Section 11: TOXICOLOGICAL INFORMATION

\*NITE: National Institute of Technology and Evaluation (JAPAN)

[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)

**Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Mercury(II) oxide	18 mg/kg (Rat)	315 mg/kg (Rat)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Mercury(II) oxide	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
Mercury(II) oxide	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
Mercury(II) oxide	Based on the NITE GHS classification results.

**Serious eye damage/ irritation**

Chemical Name	Serious eye damage/irritation source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**Respiratory or skin sensitization**

Chemical Name	Respiratory or Skin sensitization source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**Reproductive cell mutagenicity**

Chemical Name	germ cell mutagenicity source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**Carcinogenicity**

Chemical Name	Carcinogenicity source information
Mercury(II) oxide	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH
Mercury(II) oxide 21908-53-2	N/A	Group 3	N/A	N/A

**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**STOT-single exposure**

Chemical Name	STOT -single exposure- source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Mercury(II) oxide	Based on the NITE GHS classification results.

**Section 12: ECOLOGICAL INFORMATION**

\*NITE: National Institute of Technology and Evaluation (JAPAN)  
[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)

**Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Mercury(II) oxide	N/A	TLm : 0.66 ppm / 48 h	N/A

**Other data**

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Mercury(II) oxide	Based on the NITE GHS classification	Based on the NITE GHS classification

	results.	results.
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<b>Persistence and degradability</b>	No information available
<b>Bioaccumulative potential</b>	No information available
<b>Mobility in soil</b>	No information available
<b>Hazard to the ozone layer</b>	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

<b>UN number</b>	UN1641
<b>Proper shipping name:</b>	MERCURY OXIDE
<b>UN classification</b>	6.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	II
<b>Marine pollutant</b>	Yes

#### IMDG

<b>UN number</b>	UN1641
<b>Proper shipping name:</b>	MERCURY OXIDE
<b>UN classification</b>	6.1
<b>Subsidiary hazard class</b>	P
<b>Packing group</b>	II
<b>Marine pollutant (Sea)</b>	Yes
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	No information available

#### IATA

<b>UN number</b>	UN1641
<b>Proper shipping name:</b>	MERCURY OXIDE
<b>UN classification</b>	6.1
<b>Subsidiary hazard class</b>	
<b>Packing group</b>	II
<b>Environmentally Hazardous Substance</b>	Yes

### Section 15: REGULATORY INFORMATION

#### Japanese regulations

<b>Fire Service Act</b>	Firefighting Inhibitor
<b>Poisonous and Deleterious Substances Control Law</b>	Poisonous Substances 2nd. Grade
<b>Industrial Safety and Health Act</b>	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57) Notifiable Substances (Law Art.57-2) Group 2 Specified Chemical Substance Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1) Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)
<b>Act on the Evaluation of Chemical Substances and Regulation of Their</b>	Monitoring Chemical Substances (Law Art.2, Para.4)

<b>Manufacture, etc Regulations for the carriage and storage of dangerous goods in ship</b>	Toxic Substances - Poison (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
<b>Civil Aeronautics Law</b>	Toxic and Infectious Substances (Ordinance Art.194, MITL Nortification for Air Transportation of Explosives etc., Attached Table 1)
<b>Marine Pollution Prevention Law</b>	Marine pollutants (P and PP substances)
<b>Pollutant Release and Transfer Register Law (2023.4.1-)</b>	Class 1
<b>Class 1 - No.</b>	237
<b>Water Pollution Control Act</b>	Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinance Designating Wastewater Standards Art.1)
<b>Soil Contamination Control Law</b>	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-)
Mercury(II) oxide 21908-53-2 ( 98.0 )	Applicable	Applicable	Applicable

## Section 16: OTHER INFORMATION

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

NITE: National Institute of Technology and Evaluation (JAPAN)  
[https://www.chem-info.nite.go.jp/en/chem/chrip/chrip\\_search/srhInput](https://www.chem-info.nite.go.jp/en/chem/chrip/chrip_search/srhInput)  
 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

### Record of SDS revisions

The following contents were revised. Product and company Identification. Handling and storage. Exposure controls/personal protection. Stability and reactivity. Toxicological information. Ecological information. Regulatory information.

### 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**