

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
Revision date 29-Oct-2024  
Revision Number 4.05

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	OPA Reagent Set
Product Code	153-01361

**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**

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

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture** Set

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
OPA Solution	-	N/A	N/A	N/A	N/A-15-0136-1
2-ME Solution	-	N/A	N/A	N/A	N/A-15-0136-2

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

**Hazardous Component**

2-Mercaptoethanol 0.4%, o-Phthalaldehyde 0.145%

**Substances Remarks:**

The composition considered to be hazardous are listed in the above. The remaining ingredients are not hazardous substances, or exist at below reportable level.

## 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.

**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**

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

**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**

<b>Storage conditions</b>	Store away from sunlight in a cool (2-10 °C) well-ventilated dry place. Store locked up.
<b>Safe packaging material</b>	Glass
<b>Incompatible substances</b>	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
o-Phthalaldehyde 643-79-8	N/A	N/A	SL: 0.025 mg/100 cm <sup>2</sup> Skin Ceiling: 0.1 ppb vapor fraction

**Personal protective equipment**

<b>Respiratory protection</b>	Protective mask
<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

**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**

<b>Appearance</b>	liquid
<b>Odor</b>	no data available
<b>Melting point/freezing point</b>	no data available
<b>Boiling point, initial boiling point and boiling range</b>	no data available
<b>Flammability</b>	no data available
<b>Evaporation rate:</b>	no data available
<b>Flammability (solid, gas):</b>	no data available
<b>Upper/lower flammability or explosive limits</b>	
<b>Upper:</b>	no data available
<b>Lower:</b>	no data available
<b>Flash point</b>	no data available
<b>Auto-ignition temperature:</b>	no data available
<b>Decomposition temperature:</b>	no data available
<b>pH</b>	no data available
<b>Viscosity (coefficient of viscosity)</b>	no data available
<b>Dynamic viscosity</b>	no data available
<b>Solubilities</b>	water , Ethanol : miscible .
<b>n-Octanol/water partition coefficient:(log Pow)</b>	no data available
<b>Vapour pressure</b>	no data available
<b>Specific Gravity / Relative density</b>	no data available
<b>Vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

**Section 10: STABILITY AND REACTIVITY****Stability**

<b>Reactivity</b>	no data available
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Hazardous reactions</b>	None under normal processing
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight
<b>Incompatible materials</b>	Strong oxidizing agents
<b>Hazardous decomposition products</b>	Carbon dioxide (CO <sub>2</sub> ), Carbon monoxide (CO), Sulfur oxides (SO <sub>x</sub> )

### 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
2-Mercaptoethanol	244 mg/kg ( Rat )	150 mg/kg ( Rabbit )	N/A
o-Phthalaldehyde	121 mg/kg(Rat)	>2000 mg/kg(Rabbi)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
2-Mercaptoethanol	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
o-Phthalaldehyde	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
2-Mercaptoethanol	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
o-Phthalaldehyde	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
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

#### Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

#### Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

#### Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

#### Carcinogenicity

Chemical Name	Carcinogenicity source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

#### Reproductive toxicity

Chemical Name	Reproductive toxicity source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

#### STOT-single exposure

Chemical Name	STOT -single exposure- source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

**STOT-repeated exposure**

Chemical Name	STOT -repeated exposure- source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
2-Mercaptoethanol	Based on the NITE GHS classification results.
o-Phthalaldehyde	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
2-Mercaptoethanol	EC50: <i>Desmodesmus subspicatus</i> 12 mg/L 72 h	LC50: <i>Leuciscus idus</i> 46 - 100 mg/L 96 h	EC50: <i>Daphnia magna</i> 0.4 mg/L 48 h
o-Phthalaldehyde	EC50 : <i>Selenastrum capricornutum</i> 0.184 mg/L 96 h	LC50 : 0.072mg/L 96 h	EC50 : 0.087 mg/L 48 h

**Other data**

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
2-Mercaptoethanol	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
o-Phthalaldehyde	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

**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** Not regulated  
**UN number** -  
**Proper shipping name:**  
**UN classification**  
**Subsidiary hazard class**  
**Packing group**  
**Marine pollutant** Not applicable  
**IMDG** Not regulated

UN number	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Marine pollutant (Sea)	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available
IATA	Not regulated
UN number	-
Proper shipping name:	
UN classification	
Subsidiary hazard class	
Packing group	
Environmentally Hazardous Substance	Not applicable

### Section 15: REGULATORY INFORMATION

#### Japanese regulations

Fire Service Act	Not applicable
Poisonous and Deleterious Substances Control Law	Deleterious Substances 3rd. Grade
Industrial Safety and Health Act	Not applicable
Industrial Safety and Health Act (2025-)	【2025.4.1~】Notifiable Substances (Law Art.57-2)
Regulations for the carriage and storage of dangerous goods in ship	Not applicable
Civil Aeronautics Law	Not applicable
Pollutant Release and Transfer Register Law (2023.4.1-)	Not applicable
Export Trade Control Order	Not applicable

#### Industrial Safety and Health Law

Law Name	Chemical Name in Regulation	Weight %	
Notifiable Substances (Law Art.57-2)	o-Phthalaldehyde	0.145	2025/4/1

#### Poisonous and Deleterious Substances Control Law

SECTION	Chemical Name in Regulation
Deleterious Substances	2-Mercaptoethanol and its preparation

### Section 16: OTHER INFORMATION

<b>Key literature references and sources for data etc.</b>	NITE: National Institute of Technology and Evaluation (JAPAN) <a href="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</a> 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
<b>Record of SDS revisions</b>	The following contents were revised. Product and company identification. Composition/information on ingredients. Accidental release measures. Exposure controls/personal protection. Toxicological information. Ecological information. Regulatory information.
<b>Disclaimer</b>	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**