

## SAFETY DATA SHEET

According to JIS Z 7253:2019

Issue Date 22-Jul-2025

Revision Number 2.08

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Nitric Acid, Fuming (1.52)
Product Code	147-01385,141-01383

**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

## Oxidizing liquids

Category 1

## Acute toxicity - Inhalation (Vapors)

Category 2

## Skin corrosion/irritation

Category 1

## Serious eye damage/eye irritation

Category 1

## Specific target organ toxicity (single exposure)

Category 1

Category 1 respiratory system

## Specific target organ toxicity (repeated exposure)

Category 1

Category 1 respiratory system, teeth

## Aspiration hazard

Category 1

## Pictograms



## Signal word

Danger

## Hazard statements

H271 - May cause fire or explosion; strong oxidizer

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H330 - Fatal if inhaled

H304 - May be fatal if swallowed and enters airways

H370 - Causes damage to the following organs: respiratory system

H372 - Causes damage to the following organs through prolonged or repeated exposure: respiratory system, teeth

## Precautionary statements-(Prevention)

- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection
- Do not eat, drink or smoke when using this product
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

- Keep/Store away from clothing/ combustible materials
- Take any precaution to avoid mixing with combustibles
- Wear fire/ flame resistant/retardant clothing

**Precautionary statements-(Response)**

- 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
- Wash contaminated clothing before reuse
- IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
- Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Do NOT induce vomiting
- Rinse mouth
- In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
- In case of fire: Use suitable extinguishing media for extinction

**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** HNO<sub>3</sub>

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Nitric acid, fuming	97.0 (as HNO <sub>3</sub> )	63.0128	1-394	*	52583-42-3

**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**

Water spray (fog), 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

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers

#### 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 alkaline substances. Avoid contact with organic substance Avoid contact with reducing agents and combustible materials. 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

Organic substance, Combustible materials, Reducing agent, Bases

## 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
Nitric acid, fuming 52583-42-3	TWA: 2 ppm OEL TWA: 5.2 mg/m <sup>3</sup> OEL	N/A	STEL: 4 ppm TWA: 2 ppm

**Personal protective equipment**

<b>Respiratory protection</b>	Gas mask for acidic gas ( JIS T 8152 )
<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>Color</b>	pale yellow - reddish brown
<b>Turbidity</b>	clear
<b>Appearance</b>	liquid

**Odor**

Pungent odor

**Melting point/freezing point**

-51 °C

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

85 °C

**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**

Strongly acidic

**Viscosity (coefficient of viscosity)**

no data available

**Dynamic viscosity**

no data available

**Solubilities**

water : Miscible at any arbitrary ratio .

**n-Octanol/water partition coefficient:(log Pow)**

no data available

**Vapour pressure**

no data available

**Specific Gravity / Relative density**

1.52 g/mL

**Vapour density**

no data available

**Particle characteristics**

no data available

## Section 10: STABILITY AND REACTIVITY

**Stability**

<b>Reactivity</b>	no data available
<b>Chemical stability</b>	May be altered by light.

**Hazardous reactions**

None under normal processing

**Conditions to avoid**

Extremes of temperature and direct sunlight

**Incompatible materials**

Organic substance, Combustible materials, Reducing agent, Bases

**Hazardous decomposition products**

Nitrogen oxides (NOx)

## 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**

no data available

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	no data available
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

\*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** no data available

**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** UN2032  
**Proper shipping name:** Nitric acid, red fuming  
**UN classification** 8  
**Subsidiary hazard class** 5.1, 6.1  
**Packing group** I  
**Marine pollutant** Not applicable

### IMDG

**UN number** UN2032  
**Proper shipping name:** Nitric acid, red fuming  
**UN classification** 8  
**Subsidiary hazard class** 5.1, 6.1  
**Packing group** I  
**Marine pollutant (Sea)** Not applicable  
**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available

### IATA

**UN number** UN2032  
**Proper shipping name:** Nitric acid, red fuming

**UN classification** 8  
**Subsidiary hazard class** 5.1, 6.1  
**Packing group** I  
**Environmentally Hazardous Substance** Not applicable

## Section 15: REGULATORY INFORMATION

### Japanese regulations

**Fire Service Act** Category VI, nitric acid, dangerous grade 1  
**Poisonous and Deleterious Substances Control Law** Deleterious Substances 1st. Grade  
**Industrial Safety and Health Act** Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)  
 Notifiable Substances (Law Art.57-2)  
 Group 3 Specified Chemical Substance, (Ordinance on Prevention of Hazards Due to Specified Chemical Substances Art.2 Para.1, Item 6)  
 Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1)  
**Regulations for the carriage and storage of dangerous goods in ship** Corrosive Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)  
**Civil Aeronautics Law** Forbidden (Ordinance Art.194)  
**Marine Pollution Prevention Law** Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y  
**Pollutant Release and Transfer Register Law (2023.4.1-)** Not applicable  
**Water Pollution Control Act** Harmful Substances (Law Art.2, Enforcement Order Art.2, Ordinance Designating Wastewater Standards Art.1)

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-)
Nitric acid, fuming 52583-42-3 ( 97.0 (as HNO <sub>3</sub> ) )	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 Disclaimer

The following contents were revised. Physical and chemical properties.

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