

## SAFETY DATA SHEET

According to JIS Z 7253:2019  
Issue Date 27-Aug-2025  
Revision Number 2.04

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	alpha-Angelicalactone
Product Code	329-26021,325-26023

**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

Flammable liquids

Category 4

## Pictograms

## Signal word

Warning

## Hazard statements

H227 - Combustible liquid

## Precautionary statements-(Prevention)

- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
- Wear protective gloves/protective clothing/eye protection/face protection

## Precautionary statements-(Response)

- In case of fire: Use suitable extinguishing media for extinction

## Precautionary statements-(Storage)

- Store in a well-ventilated place. Keep cool

## 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>5</sub>H<sub>6</sub>O<sub>2</sub>

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
alpha-Angelicalactone	85	98.10	N/A	8-(4)-142,8-(4)-566	591-12-8

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**

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. Vapors may form explosive mixtures with air

**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**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use with local exhaust ventilation. 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

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

#### Storage

##### Safe storage conditions

##### Storage conditions

Store away from sunlight in well-ventilated place at room temperature (preferably cool).  
Keep container tightly closed.

##### 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

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Personal protective equipment

##### Respiratory protection

gas mask for organic gas ( JIS T 8152 )

##### 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.

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

Colorless - yellow

##### Appearance

liquid

#### Odor

no data available

#### Melting point/freezing point

18 °C

#### Boiling point, initial boiling point and boiling range

no data available

#### Flammability

Combustible liquid

#### 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

68 °C

#### 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

Ethanol and acetone : miscible . water : practically insoluble, or insoluble .

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

no data available

#### Vapour pressure

no data available

#### Specific Gravity / Relative density

1.10

#### Vapour density

no data available

#### Particle characteristics

no data available

## Section 10: STABILITY AND REACTIVITY

### Stability

#### Reactivity

no data available

#### Chemical stability

Stable under recommended storage conditions.

### Hazardous reactions

None under normal processing

### Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</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
alpha-Angelicalactone	2800 mg/kg ( Rat )	N/A	N/A

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

### Serious eye damage/ irritation

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

### Respiratory or skin sensitization

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

### Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
alpha-Angelicalactone	Based on the NITE GHS classification results.

### Carcinogenicity

Chemical Name	Carcinogenicity source information
alpha-Angelicalactone	Based on the NITE GHS classification results.

### Reproductive toxicity

Chemical Name	Reproductive toxicity source information
alpha-Angelicalactone	Based on the NITE GHS classification results.

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

Chemical Name	Aspiration Hazard source information
alpha-Angelicalactone	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** no data available

### Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
alpha-Angelicalactone	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** No information available

**Annex II of MARPOL 73/78 and the IBC Code**

**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	Category IV, Class II petroleum, dangerous grade 3
Poisonous and Deleterious Substances Control Law	Not applicable
Industrial Safety and Health Act	Not applicable
Industrial Safety and Health Act (2026~)	【2026.4.1~】Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57) 【2026.4.1~】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

### Industrial Safety and Health Law

Law Name	Chemical Name in Regulation	Weight %	Scheduled enforcement date
Notifiable Substances (Law Art.57-2)	5-Methylfuran-2(3H)-one	85	2026/4/1

## 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. Hazards identification. Fire fighting measures. Exposure controls/personal protection. 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