

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 05-Mar-2024
Revision Number 4.05

Section 1: PRODUCT AND COMPANY IDENTIFICATION

| | |
|--------------|------------------------|
| Product Name | Phenyl Chlorocarbonate |
| Product Code | 167-01463 |

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

Acute toxicity - Oral

Category 4

Acute toxicity - Inhalation (Vapors)

Category 1

Pictograms



Signal word

Danger

Hazard statements

H227 - Combustible liquid

H302 - Harmful if swallowed

H330 - Fatal if inhaled

Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- 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
- Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements-(Response)

- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth
- 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 CICOOC6H5

| Chemical Name | Weight-% | Molecular weight | ENCS | ISHL No. | CAS RN |
|------------------------|----------|------------------|---------|----------|-----------|
| Phenyl chlorocarbonate | 98.0 | 156.57 | (3)-629 | * | 1885-14-9 |

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), Carbon dioxide (CO2), Foam, Extinguishing powder, Sand

Unsuitable extinguishing media

Do not use straight streams

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

Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. Possibility of hydrogen chloride generated by hydrolysis occurs. May be internal pressure of the container is increased. Wear safety glasses, protective gloves, etc. when you opening 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). 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

Strong oxidizing agents, Water

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 - slightly yellow

Turbidity

clear

Appearance

liquid

Odor

Pungent odor

Melting point/freezing point

-20 °C

Boiling point, initial boiling point and boiling range

189 °C

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

78 °C

Auto-ignition temperature:

560 °C

Decomposition temperature:

no data available

pH

no data available

Viscosity (coefficient of viscosity)

no data available

Dynamic viscosity

no data available

Solubilities

benzene , ether , chloroform : soluble . water : insoluble .

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

no data available

Vapour pressure

90 Pa

Specific Gravity / Relative density

1.243 - 1.253 g/mL

Vapour density

5.41 (air = 1)

Particle characteristics

no data available

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

no data available

Chemical stability

May be altered by light. Altered by moisture.

Hazardous reactions

None under normal processing

Conditions to avoid

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

Incompatible materials

Strong oxidizing agents, Water

Hazardous decomposition productsCarbon monoxide (CO), Carbon dioxide (CO₂), Halides**Section 11: TOXICOLOGICAL INFORMATION****Acute toxicity**

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------|----------------------|-----------------------|-----------------|
| Phenyl chlorocarbonate | 1734 mg / kg (Rat) | 4883 mg / kg (Rabbit) | N/A |

| Chemical Name | Acute toxicity -oral- source information | Acute toxicity -dermal- source information | Acute toxicity -inhalation gas- source information |
|------------------------|---|---|--|
| Phenyl chlorocarbonate | 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 |
|------------------------|--|---|---|
| Phenyl chlorocarbonate | 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 |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

Serious eye damage/ irritation

| Chemical Name | Serious eye damage/irritation source information |
|------------------------|--|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

Respiratory or skin sensitization

| Chemical Name | Respiratory or Skin sensitization source information |
|------------------------|--|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

Reproductive cell mutagenicity

| Chemical Name | germ cell mutagenicity source information |
|---------------|---|
|---------------|---|

| | |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |
|------------------------|---|

Carcinogenicity

| Chemical Name | Carcinogenicity source information |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

Reproductive toxicity

| Chemical Name | Reproductive toxicity source information |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

STOT-single exposure

| Chemical Name | STOT -single exposure- source information |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

STOT-repeated exposure

| Chemical Name | STOT -repeated exposure- source information |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

Aspiration hazard

| Chemical Name | Aspiration Hazard source information |
|------------------------|---|
| Phenyl chlorocarbonate | Based on the NITE GHS classification results. |

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity No information 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 |
|------------------------|--|---|
| Phenyl chlorocarbonate | 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

UN number UN2746
 Proper shipping name: Phenyl chloroformate
 UN classification 6.1
 Subsidiary hazard class 8
 Packing group II
 Marine pollutant Not applicable

IMDG

UN number UN2746
 Proper shipping name: Phenyl chloroformate
 UN classification 6.1
 Subsidiary hazard class 8
 Packing group II

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 UN2746
 Proper shipping name: Phenyl chloroformate
 UN classification 6.1
 Subsidiary hazard class 8
 Packing group II
 Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act Category IV, Class III petroleum, dangerous grade 3
Poisonous and Deleterious Substances Control Law Poisonous Substances 2nd. Grade
Industrial Safety and Health Act Not applicable
Industrial Safety and Health Act (2024~) 【2024.4.1~】 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)
 【2024.4.1~】 Notifiable Substances (Law Art.57-2)
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 (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) | phenyl chloroformate | 98.0 | 2024/4/1 |

| 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-) |
|--|--|--|---|
| Phenyl chlorocarbonate 1885-14-9 (98.0) | 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

Record of SDS revisions
Disclaimer

The following contents were revised. Regulatory information.

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