

# SAFETY DATA SHEET

According to JIS Z 7253:2019  
**Revision date** 12-Dec-2022  
 Revision Number 5.07

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	Benzoyl Chloride
<b>Product Code</b>	023-01212,027-01215

**Manufacturer** FUJIFILM Wako Pure Chemical Corporation  
 1-2 Doshomachi 3-Chome  
 Chuo-ku, Osaka 540-8605, Japan  
 Phone: +81-6-6203-3741  
 Fax: +81-6-6203-5964

**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 and restrictions on use** For research use only

## Section 2: HAZARDS IDENTIFICATION

**GHS classification**

**Classification of the substance or mixture**

<b>Flammable liquids</b>	Category 4
<b>Acute toxicity - Oral</b>	Category 4
<b>Acute toxicity - Dermal</b>	Category 3
<b>Acute toxicity - Inhalation (Vapors)</b>	Category 2
<b>Skin corrosion/irritation</b>	Category 1
<b>Serious eye damage/eye irritation</b>	Category 1
<b>Skin sensitization</b>	Category 1
<b>Carcinogenicity</b>	Category 2
<b>Specific target organ toxicity (single exposure)</b>	Category 2
Category 2 respiratory system	
<b>Specific target organ toxicity (repeated exposure)</b>	Category 1
Category 1 respiratory system	
<b>Acute aquatic toxicity</b>	Category 1
<b>Chronic aquatic toxicity</b>	Category 1

**Pictograms**



**Signal word**

Danger

**Hazard statements**

- H227 - Combustible liquid
- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H302 - Harmful if swallowed
- H311 - Toxic in contact with skin

H330 - Fatal if inhaled  
 H351 - Suspected of causing cancer  
 H317 - May cause an allergic skin reaction  
 H410 - Very toxic to aquatic life with long lasting effects  
 H400 - Very toxic to aquatic life  
 H371 - May cause damage to the following organs: respiratory system  
 H372 - Causes damage to the following organs through prolonged or repeated exposure: respiratory system

**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
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Avoid release to the environment
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

**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
- Call a POISON CENTER or doctor/physician if you feel unwell
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- If skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth
- Do NOT induce vomiting
- In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction
- Collect spillage

**Precautionary statements-(Storage)**

- Store locked up
- 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>6</sub>H<sub>5</sub>COCl

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Benzoyl chloride	99.0	140.57	(3)-1387	*	98-88-4

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

**Impurities and/or Additives:** Not applicable

### 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**

Extinguishing powder, Carbon dioxide (CO<sub>2</sub>), 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. Packed with an inert gas. 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

Chemical Name	JSOH (Japan)	ISHL (Japan)	ACGIH
Benzoyl chloride 98-88-4	N/A	N/A	Ceiling: 0.5 ppm

### Personal protective equipment

**Respiratory protection** Protective mask  
**Hand protection** Impermeable protective gloves  
**Eye protection** protective eyeglasses or chemical safety goggles  
**Skin and body protection** Long-sleeved work clothes

### General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Form

**Color** colorless  
**Turbidity** clear  
**Appearance** liquid

### Odor

Pungent odor

### Melting point/freezing point

-0.5 °C

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

197.2 °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

72 °C

### Auto-ignition temperature:

600 °C

### Decomposition temperature:

no data available

### pH

no data available

### Viscosity (coefficient of viscosity)

no data available

### Dynamic viscosity

no data available

### Solubilities

water , Ethanol : decomposes.

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

no data available

### Vapour pressure

no data available

### Specific Gravity / Relative density

1.2 g/mL

### 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. Decomposed by the absorption of 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 products**Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Halides, Hydrogen chloride (HCl) gas**Section 11: TOXICOLOGICAL INFORMATION****Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Benzoyl chloride	1140 - 2618 mg/kg ( Rat )	790 mg/kg ( Rabbit )	247 ppm ( Rat ) 4 h

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

**Serious eye damage/ irritation**

Chemical Name	Serious eye damage/irritation source information
Benzoyl chloride	Based on the NITE GHS classification results.

**Respiratory or skin sensitization**

Chemical Name	Respiratory or Skin sensitization source information
Benzoyl chloride	Based on the NITE GHS classification results.

**Reproductive cell mutagenicity**

Chemical Name	germ cell mutagenicity source information
Benzoyl chloride	Based on the NITE GHS classification results.

**Carcinogenicity**

Chemical Name	Carcinogenicity source information
Benzoyl chloride	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Benzoyl chloride 98-88-4		Group 2A Group 3		Group 2B

**Reproductive toxicity**

Chemical Name	Reproductive toxicity source information
Benzoyl chloride	Based on the NITE GHS classification results.

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

Chemical Name	Aspiration Hazard source information
Benzoyl chloride	Based on the NITE GHS classification results.

**Section 12: ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Benzoyl chloride	N/A	N/A	LC50: Glass shrimp 0.12 mg/L 96 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
Benzoyl chloride	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

<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**

UN number	UN1736
Proper shipping name:	Benzoyl chloride
UN classification	8
Subsidiary hazard class	
Packing group	II
Marine pollutant	Yes

**IMDG**

UN number	UN1736
Proper shipping name:	Benzoyl chloride
UN classification	8
Subsidiary hazard class	
Packing group	II
Marine pollutant (Sea)	Yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

**IATA**

UN number	UN1736
Proper shipping name:	Benzoyl chloride
UN classification	8
Subsidiary hazard class	
Packing group	II
Environmentally Hazardous Substance	Yes

### Section 15: REGULATORY INFORMATION

**International Inventories**

EINECS/ELINCS	Listed
TSCA	Listed

**Japanese regulations**

Fire Service Act	Category IV, Class III petroleums, dangerous grade 3
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<b>Poisonous and Deleterious Substances Control Law</b>	Deleterious Substances 3rd. Grade
<b>Industrial Safety and Health Act</b>	Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18) Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.102
<b>Regulations for the carriage and storage of dangerous goods in ship</b>	Corrosive Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
<b>Civil Aeronautics Law</b>	Corrosive Substances (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
<b>Pollutant Release and Transfer Register Law (~2023.3.31)</b>	Not applicable
<b>Pollutant Release and Transfer Register Law (2023/4/1~)</b>	<u>Class 2</u>
<b>Class 2 - No.</b>	<u>760</u>
<b>Export Trade Control Order</b>	Not applicable

Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2) (~2024.3.31)	Pollutant Release and Transfer Register Law (~2023.3.31)
Benzoyl chloride 98-88-4 ( 99.0 )	Applicable	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

### 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 Z7252(2019). \*JIS: Japanese Industrial Standards

**End of Safety Data Sheet**