Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Benzofuran</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>028-00961</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Classification of the substance or mixture</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Category 2: liver</td>
<td></td>
</tr>
<tr>
<td>Short-term (acute) hazardous to the aquatic environment</td>
<td>Category 3</td>
</tr>
<tr>
<td>Long-term (chronic) hazardous to the aquatic environment</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

**Pictograms**

**Signal word**  
Warning

**Hazard statements**

H226 - Flammable liquid and vapor  
H351 - Suspected of causing cancer  
H402 - Harmful to aquatic life  
H412 - Harmful to aquatic life with long lasting effects  
H373 - May cause damage to the following organs through prolonged or repeated exposure: liver

**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.  
- Do not breathe dust/fume/gas/mist/vapors/spray  
- Avoid release to the environment  
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
- Keep container tightly closed
• Ground/bond container and receiving equipment
• Use explosion-proof electrical/ventilating/lighting/equipment
• Use only non-sparking tools
• Take precautionary measures against static discharge

Precautionary statements-(Response)
• IF exposed or concerned: Get medical advice/attention
• IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
• In case of fire: Use CO2, dry chemical, or foam for extinction

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 C8H6O

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>Molecular weight</th>
<th>ENCS</th>
<th>ISHL No.</th>
<th>CAS RN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>95.0</td>
<td>118.13</td>
<td>N/A</td>
<td>(9)-535</td>
<td>271-89-6</td>
</tr>
</tbody>
</table>

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
Water spray (fog), Carbon dioxide (CO2), 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
Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. To cut with care and wear protective gloves and protective goggles to ampoule time of the opening (Cutting method to check the label). 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.

Safe packaging material
Ampoule

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
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 - yellow brown

Turbidity: clear

Appearance: liquid

Odor: characteristic odor

Melting point/freezing point: <-18 °C

Boiling point, initial boiling point and boiling range: 173 °C

Flammability: Flammable liquid and vapor

Evaporation rate: No data available

Flash point: 56 °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


n-Octanol/water partition coefficient:(log Pow) 2.67

Vapour pressure: No data available

Specific Gravity / Relative density: 1.076(15/15°C)

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.

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 (CO2)

---

**Section 11: TOXICOLOGICAL INFORMATION**

Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Acute toxicity -oral- source information</th>
<th>Acute toxicity -dermal- source information</th>
<th>Acute toxicity -inhalation gas-source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Acute toxicity -inhalation vapor- source information</th>
<th>Acute toxicity -inhalation dust-source information</th>
<th>Acute toxicity -inhalation mist-source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
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</tr>
</tbody>
</table>

Skin irritation/corrosion

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Skin corrosion/irritation source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

Serious eye damage/ irritation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Serious eye damage/irritation source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>
Respiratory or skin sensitization

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Respiratory or Skin sensitization source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

Reproductive cell mutagenicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>germ cell mutagenicity source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
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</tbody>
</table>

Carcinogenicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogenicity source information</th>
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</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>JSOH (Japan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>271-89-6</td>
<td>Group 2B</td>
<td>-</td>
<td>Group 2B</td>
</tr>
</tbody>
</table>

Reproductive toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Reproductive toxicity source information</th>
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</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
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</tbody>
</table>

STOT-single exposure

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>STOT -single exposure- source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

STOT-repeated exposure

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>STOT -repeated exposure- source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

Aspiration hazard

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Aspiration Hazard source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>N/A</td>
<td>LC50: Fathead minnow 14 mg/L 96 h</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Other data

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Short-term (acute) hazardous to the aquatic environment</th>
<th>Long-term (chronic) hazardous to the aquatic environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

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
Mobility 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 UN1993
Proper shipping name: Flammable liquid, n.o.s. (Benzofuran )
UN classification 3
Subsidiary hazard class
Packing group III
Marine pollutant Not applicable

IMDG
UN number UN1993
Proper shipping name: Flammable liquid, n.o.s. (Benzofuran )
UN classification 3
Subsidiary hazard class
Packing group III
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 UN1993
Proper shipping name: Flammable liquid, n.o.s. (Benzofuran )
UN classification 3
Subsidiary hazard class
Packing group III
Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

International Inventories
- EINECS/ELINCS Listed
- TSCA Listed

Japanese regulations
Fire Service Act Category IV, Class II petroleums, dangerous grade 3
Poisonous and Deleterious Substances Control Law Not applicable
Industrial Safety and Health Act 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.535
Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)
Regulations for the carriage and storage of dangerous goods in ship Flammable Liquids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law Flammable Liquids (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
Pollutant Release and Transfer Register Law Not applicable
Export Trade Control Order Not applicable

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Poisonous and Deleterious Substances Control Law</th>
<th>Industrial Safety and Health Act Substances (Law Art.57-2)</th>
<th>Pollutant Release and Transfer Register Law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzofuran 271-89-6 (95.0)</td>
<td>-</td>
<td>Applicable</td>
<td>-</td>
</tr>
</tbody>
</table>

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
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 Z7522(2019). *JIS: Japanese Industrial Standards

End of Safety Data Sheet