SAFETY DATA SHEET

Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>2-(p-Fluorophenyl)oxirane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>327-78211</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 purposes

Section 2: HAZARDS IDENTIFICATION

GHS classification
Classification of the substance or mixture
Flammable liquids Category 2

Pictograms

Signal word
Danger

Hazard statements
H225 - Highly flammable liquid and vapor

Precautionary statements-(Prevention)
• 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
• Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements-(Response)
• 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 in a well-ventilated place. Keep cool

Precautionary statements-(Disposal)
• Dispose of contents/container to an approved waste disposal plant

Others
Revision Date 26-Oct-2020

Other hazards
Not available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Single Substance or Mixture**
Substance

**Formula**
C8H7FO

<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>2-(p-Fluorophenyl)oxirane</td>
<td>90</td>
<td>138.14</td>
<td>N/A</td>
<td>N/A</td>
<td>18511-62-1</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 contaminate 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**
Section 7: HANDLING AND STORAGE

Handling
Technical measures
Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. 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.

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
Dust 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 - pale yellow

Appearance
Liquid

Odor
No data available

Melting point/freezing point
No data available

Boiling point, initial boiling point and boiling range
No data available

Flammability
Highly flammable liquid and vapor

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
22.2 °C

Auto-ignition temperature:
No data available

Decomposition temperature:
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), Halides

Section 11: TOXICOLOGICAL INFORMATION

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

Ecotoxicity  No information 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**: UN1993
- **Proper shipping name**: Flammable liquid, n.o.s. (2-(p-Fluorophenyl)oxirane)
- **UN classification**: 3
- **Subsidiary hazard class**: III
- **Packing group**: Not applicable

**IMDG**
- **UN number**: UN1993
- **Proper shipping name**: Flammable liquid, n.o.s. (2-(p-Fluorophenyl)oxirane)
- **UN classification**: 3
- **Subsidiary hazard class**: III
- **Packing group**: Not applicable
- **Marine pollutant (Sea)**: No information available
- **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. (2-(p-Fluorophenyl)oxirane)
- **UN classification**: 3
- **Subsidiary hazard class**: III
- **Environmentally Hazardous Substance**: Not applicable

## Section 15: REGULATORY INFORMATION

**International Inventories**
- **EINECS/ELINCS**: -
- **TSCA**: -

**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**: 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

## 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 Organics Chemistry, SSOCJ, Koudansha Scientific Co.Ltd.
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