# SAFETY DATA SHEET

According to JIS Z 7253:2012
Revision Date 20-Jan-2020
Version 2.01

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>n-Butyl p-Toluenesulfonate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>321-64022, 325-64025</td>
</tr>
<tr>
<td>CAS RN</td>
<td>778-28-9</td>
</tr>
<tr>
<td>Formula</td>
<td>C11H16O3S</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>FUJIFILM Wako Pure Chemical Corporation</td>
</tr>
<tr>
<td></td>
<td>1-2 Doshomachi 3-Chome, Chuo-ku, Osaka</td>
</tr>
<tr>
<td></td>
<td>540-8605, Japan</td>
</tr>
<tr>
<td></td>
<td>Phone: +81-6-6203-3741</td>
</tr>
<tr>
<td></td>
<td>Fax: +81-6-6203-5964</td>
</tr>
<tr>
<td>Supplier</td>
<td>FUJIFILM Wako Pure Chemical Corporation</td>
</tr>
<tr>
<td></td>
<td>1-2 Doshomachi 3-Chome, Chuo-ku, Osaka</td>
</tr>
<tr>
<td></td>
<td>540-8605, Japan</td>
</tr>
<tr>
<td></td>
<td>Phone: +81-6-6203-3741</td>
</tr>
<tr>
<td></td>
<td>Fax: +81-6-6203-2029</td>
</tr>
<tr>
<td>Emergency telephone</td>
<td>+81-6-6203-3741 / +81-3-3270-8571</td>
</tr>
<tr>
<td>number</td>
<td></td>
</tr>
<tr>
<td>Recommended uses and</td>
<td>For research purposes</td>
</tr>
<tr>
<td>restrictions on use</td>
<td></td>
</tr>
</tbody>
</table>

## Section 2: HAZARDS IDENTIFICATION

### GHS classification

**Classification of the substance or mixture**

**Acute toxicity - Oral**

Category 4

### Pictograms

- ! [Warning]

### Signal word

Warning

### Hazard statements

H302 - Harmful if swallowed

### Precautionary statements-(Prevention)

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product

### Precautionary statements-(Response)

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

### Precautionary statements-(Storage)

- Not applicable

### 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: C11H16O3S

<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>Butyl p-toluenesulfonate</td>
<td>95</td>
<td>228.31</td>
<td>(3)-1911</td>
<td>公表</td>
<td>778-28-9</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

Special extinguishing method
No information available

Specific hazards arising from the chemical product
Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Protection of 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. 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
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
Protective mask

Hand protection
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 yellowish brown

Appearance
liquid

Odor
unpleasant

pH
No data available

Melting point/freezing point
No data available

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

Flash point
No data available

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

Vapour pressure
No data available

Vapour density
No data available

Specific Gravity / Relative density
1.12-1.13

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

n-Octanol/water partition coefficient:(log Pow)
3.17

Auto-ignition temperature:
No data available

Decomposition temperature:
No data available
Viscosity (coefficient of viscosity)  No data available
Dynamic viscosity  No data available

Section 10: STABILITY AND REACTIVITY

Stability

Stability  Stable under recommended storage conditions.
Reactivity  No data available

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 monooxide (CO), Carbon dioxide (CO2), Sulfur oxides (SOx)

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  Not regulated
UN number  -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Marine pollutant: Not applicable

IMDG
UN number: Not regulated
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
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: Not regulated
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Environmentally Hazardous Substance: Not applicable

Section 15: REGULATORY INFORMATION

International Inventories
EINECS/ELINCS: Listed
TSCA: Listed

Japanese regulations
Fire Service Act: Category IV, Class III petroleum, dangerous grade 3
Poisonous and Deleterious Substances Control Law: Not applicable
Industrial Safety and Health Act: Not applicable
Regulations for the carriage and storage of dangerous goods in ship: Not applicable
Civil Aeronautics Law: Not applicable
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 Oraganic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
etc

Disclaimer
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(2014). *JIS: Japanese Industrial Standards