Section 1: PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>2,4,6-Tribromophenol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>201-04372,205-04375</td>
</tr>
<tr>
<td>CAS RN</td>
<td>118-79-6</td>
</tr>
<tr>
<td>Formula</td>
<td>Br3C6H2OH</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>FUJIFILM Wako Pure Chemical Corporation</td>
</tr>
<tr>
<td></td>
<td>1-2 Doshomachi 3-Chome</td>
</tr>
<tr>
<td></td>
<td>Chuo-ku, Osaka 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 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 number</td>
<td>+81-6-6203-3741 / +81-3-3270-8571</td>
</tr>
</tbody>
</table>

Recommended uses and restrictions on use
For research purposes

Section 2: HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Classification of the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>Skin sensitization</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
</tr>
<tr>
<td>Category 2 nervous system</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
</tr>
<tr>
<td>Category 2 liver, kidneys</td>
</tr>
<tr>
<td>Aquatic environment (acute hazard)</td>
</tr>
<tr>
<td>Aquatic environment (long-term hazard)</td>
</tr>
</tbody>
</table>

Pictograms

![Pictograms]

Signal word Warning

Hazard statements
H319 - Causes serious eye irritation
H302 - Harmful if swallowed
H361 - Suspected of damaging fertility or the unborn child
H317 - May cause an allergic skin reaction
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H371 - May cause damage to the following organs: nervous system
H373 - May cause damage to the following organs through prolonged or repeated exposure: liver, kidneys

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.
• Wash face, hands and any exposed skin thoroughly after handling
• Do not eat, drink or smoke when using this product
• Contaminated work clothing should not be allowed out of the workplace
• Protective gloves
• Do not breathe dust/fume/gas/mist/vapors/spray
• Avoid release to the environment

Precautionary statements-(Response)
• IF exposed or concerned: Get medical advice/attention
• IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
• If eye irritation persists: Get medical advice/attention.
• IF ON SKIN: Wash with plenty of soap and water
• If skin irritation or rash occurs: Get medical advice/attention
• Wash contaminated clothing before reuse.
• IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
• Rinse mouth.
• Collect spillage

Precautionary statements-(Storage)
• Store locked up.

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 Br3C6H2OH

<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>2,4,6-Tribromophenol</td>
<td>98.0</td>
<td>330.80</td>
<td>(3)-959</td>
<td>4-(10)-758</td>
<td>118-79-6</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

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 retrait 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
Sweep up and gather scattered particles, and collect it in an empty airtight container.

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
Avoid contact with 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
Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

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
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: Protection 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: White - nearly white
Color: crystals - crystalline powder
Appearance: No data available
Odor: No data available
pH: No data available
Melting point/freezing point: 92 - 95 °C
Boiling point, initial boiling point and boiling range: 290 °C
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: 2.55
n-Octanol/water partition coefficient: (log Pow): 4.13
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:
May be altered by light.
Reactivity: No data available

Hazardous reactions:
None under normal processing

Conditions to avoid:
Extremes of temperature and direct sunlight

Incompatible materials:
Strong oxidizing agents

Hazardous decomposition products:
Carbon monoxide (CO), Carbon dioxide (CO2), Halides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</td>
<td>1092 mg/kg (rat)</td>
<td>&gt;2000 mg/kg (rat)</td>
<td>&gt;200 mg/L (rat) 4h</td>
</tr>
</tbody>
</table>

<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>2,4,6-Tribromophenol</td>
<td>LD50(orf, rat): 2,000mg/kg (CERIHazard Data Collection 2001-53 (2002)), LD50(orf, rat): 1,486mg/kg, 1,905mg/kg, 1,819mg/kg, 5,012mg/kg (CICAD 66 (2005)).</td>
<td>LD50(skin, rat): &gt;2,000mg/kg (CICAD (2005)), LD50(skin, rabbit): &gt;2,000, &gt;8,000mg/kg (CICAD (2005))</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

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LD50 (orl, rat): 200 mg/kg, LD50 (orl, rat): 1486 mg/kg (Risk Assessment of the Ministry of the Environment Vol. 3 (2004))

<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>2,4,6-Tribromophenol</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>

**Skin irritation/corrosion**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Skin corrosion irritation source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</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 source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</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, Skin sensitization source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Reproductive cell mutagenicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Mutagenic source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Carcinogenicity source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**Reproductive toxicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Reproductive toxicity source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>

**STOT - single exposure**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>STOT - single exposure source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</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>2,4,6-Tribromophenol</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>2,4,6-Tribromophenol</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>2,4,6-Tribromophenol</td>
<td>EC50: <em>Pseudokirchneriella subcapitata</em> 0.4 - 72 mg/L 72 h</td>
<td>LC50: <em>Cyprinus carpio</em> 1.0 - 96 mg/L 96 h</td>
<td>LC50: <em>Pimephales promelas</em> 4.7 - 9.8 mg/L 96 h</td>
</tr>
</tbody>
</table>

**Other data**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Aquatic toxicity - Acute- source information</th>
<th>Aquatic toxicity - Chronic- source information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tribromophenol</td>
<td>Based on the NITE GHS classification results.</td>
<td>Based on the NITE GHS classification results.</td>
</tr>
</tbody>
</table>
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: UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (2,4,6-Tribromophenol)
UN classification: 9
Subsidiary hazard class:
Packing group: III
Marine pollutant: Yes

IMDG
UN number: UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (2,4,6-Tribromophenol)
UN classification: 9
Subsidiary hazard class:
Packing group: III
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: UN3077
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (2,4,6-Tribromophenol)
UN classification: 9
Subsidiary hazard class:
Packing group: III
Environmentally Hazardous Substance: Yes

Section 15: REGULATORY INFORMATION

International Inventories
EINECS/ELINCS: Listed
TSCA: Listed

Japanese regulations
Fire Service Act: Not applicable
Poisonous and Deleterious Substances Control Law: Not applicable
Industrial Safety and Health Act: Noxious Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Regulations for the carriage and storage of dangerous goods in ship: Civil Aeronautics Law
Poisonous and Deleterious Substances Control Law: Miscellaneous Dangerous Substances and Articles (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)

Pollutant Release and Transfer Register Law
Class 1 - No.: 294
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
Chemical Dictionary, Kyoritsu 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

End of Safety Data Sheet