

ALFAAA18354

# 4-n-Propylbenzenesulfonyl chloride

# SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

| 产品说明:                      | 4-正丙基苯磺酰氯, 95%  |
|----------------------------|---|
| Product Description:       | 4-n-Propylbenzenesulfonyl chloride  |
| Cat No. :                  | <b>A18354</b>   |
| CAS No                     | 146949-07-7   |
| Molecular Formula          | C9 H11 CI O2 S  |
| Supplier                   | Avocado Research Chemicals Ltd.<br>(Part of Thermo Fisher Scientific)<br>Shore Road, Heysham<br>Lancashire, LA3 2XY,<br>United Kingdom<br>Office Tel: +44 (0) 1524 850506<br>Office Fax: +44 (0) 1524 850608  |
| Emergency Telephone Number | For information <b>US</b> call: 001-800-227-6701 / <b>Europe</b> call: +32 14 57 52 11<br>Emergency Number <b>US:</b> 001-201-796-7100 / <b>Europe:</b> +32 14 57 52 99<br><b>CHEMTREC</b> Tel. No. <b>US:</b> 001-800-424-9300 / <b>Europe:</b> 001-703-527-3887 |
| E-mail address             | begel.sdsdesk@thermofisher.com  |
| Recommended Use            | Laboratory chemicals.   |
| Uses advised against       | No Information available  |

# **SECTION 2. HAZARD IDENTIFICATION**

| Physical State           |  |
|--------------------------|--|
| Liquid Low melting solid |  |

Appearance Colorless - Light yellow Odor Acrid

**Emergency Overview** 

Causes severe skin burns and eye damage. Moisture sensitive.

# Classification of the substance or mixture

| Skin Corrosion/Irritation         | Category 1 B |
|-----------------------------------|--------------|
| Serious Eye Damage/Eye Irritation | Category 1   |

#### Label Elements



Signal Word

Danger

**Hazard Statements** 

H314 - Causes severe skin burns and eye damage

## 4-n-Propylbenzenesulfonyl chloride

## Precautionary Statements

#### Prevention

P264 - Wash face, hands and any exposed skin thoroughly after handling P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective gloves/protective clothing/eye protection/face protection Response P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsina P310 - Immediately call a POISON CENTER or doctor P362 + P364 - Take off contaminated clothing and wash it before reuse Storage P403 + P233 - Store in a well-ventilated place. Keep container tightly closed Disposal P501 - Dispose of contents/ container to an approved waste disposal plant **Physical and Chemical Hazards** 

# None identified.

**Health Hazards** 

Corrosive. Causes skin and eye burns.

Environmental hazards

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

This product does not contain any known or suspected endocrine disruptors.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component                           | CAS No      | Weight % |
|-------------------------------------|-------------|----------|
| 4-Propylbenzene-1-sulfonyl chloride | 146949-07-7 | <=100    |

## **SECTION 4. FIRST AID MEASURES**

#### **General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

#### Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

#### Inhalation

If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

#### Ingestion

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

#### Most important symptoms and effects

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

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# Self-Protection of the First Aider

#### No special precautions required.

#### Notes to Physician

Treat symptomatically.

# **SECTION 5. FIRE-FIGHTING MEASURES**

#### Suitable Extinguishing Media

Dry sand. Carbon dioxide (CO 2). Powder. Do not use water or foam. CO 2, dry chemical, dry sand, alcohol-resistant foam.

# Extinguishing media which must not be used for safety reasons

No information available.

## **Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

## **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

# SECTION 6. ACCIDENTAL RELEASE MEASURES

## Personal Precautions

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## **Environmental Precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information.

#### Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Refer to protective measures listed in Sections 8 and 13.

# **SECTION 7. HANDLING AND STORAGE**

#### Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

#### Storage

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

#### Specific Use(s)

Use in laboratories

# SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### **Control Parameters**

**Exposure Controls** 

## Engineering Measures

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None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location. .

#### Personal protective equipment

| Eye Protection  | Goggles (European standard - EN 166)                      |                      |                       |   |  |  |  |  |
|---|---|----------------------|-----------------------|---|--|--|--|--|
| Hand Protection   | Protective gloves   |                      |                       |   |  |  |  |  |
| Glove material<br>Nitrile rubber<br>Neoprene<br>Natural rubber<br>PVC | Breakthrough time<br>See manufacturers<br>recommendations | Glove thickness<br>- | EU standard<br>EN 374 | Glove comments<br>(minimum requirement) |  |  |  |  |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

| Skin and body protection        | Long sleeved clothing   |
|---------------------------------|---|
| <b>Respiratory Protection</b>   | No protective equipment is needed under normal use conditions.  |
| Large scale/emergency use       | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced <b>Recommended Filter type:</b> Particle filter |
| Small scale/Laboratory use      | Maintain adequate ventilation<br><b>Recommended half mask:-</b> Valve filtering: EN405; or; Half mask: EN140; plus filter, EN<br>141  |
| Hygiene Measures                | Handle in accordance with good industrial hygiene and safety practice.  |
| Environmental exposure controls | No information available.   |

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

| Appearance<br>Physical State   | Colorless - Light yellow<br>Liquid Low melting solid  |  |
|--|---|--|
| Odor<br>Odor Threshold<br>pH<br>Melting Point/Range<br>Softening Point<br>Boiling Point/Range<br>Flash Point<br>Evaporation Rate<br>Flammability (solid,gas)<br>Explosion Limits | Acrid<br>No data available<br>No information available<br>20 - 22 °C / 68 - 71.6 °F<br>No data available<br>275 - 276 °C / 527 - 528.8 °F<br>No information available<br>No data available<br>Not applicable<br>No data available | <b>Method -</b> No information available<br>Liquid |
| Vapor Pressure<br>Vapor Density<br>Specific Gravity / Density<br>Bulk Density<br>Water Solubility<br>Solubility in other solvents  | No data available<br>No data available<br>1.223 g/cm3<br>Not applicable<br>No information available<br>No information available   | (Air = 1.0)<br>@ 20 °C<br>Liquid                   |

# Partition Coefficient (n-octanol/water)Autoignition TemperatureNo data availableDecomposition TemperatureNo data availableViscosityNo data availableExplosive PropertiesNo information av

Molecular Formula Molecular Weight

**Oxidizing Properties** 

No information available No information available C9 H11 CI O2 S 218.70

# **SECTION 10. STABILITY AND REACTIVITY**

| Stability                                       | Moisture sensitive.  |
|---|--|
| Hazardous Reactions<br>Hazardous Polymerization | None under normal processing.<br>No information available. |
| Conditions to Avoid                             | None known.  |
| Materials to avoid                              | Strong bases. Oxidizing agent.                             |

Hazardous Decomposition Products Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides. Hydrogen chloride.

# SECTION 11. TOXICOLOGICAL INFORMATION

#### **Product Information**

- (a) acute toxicity;
- (b) skin corrosion/irritation; Category 1 B
- (c) serious eye damage/irritation; Category 1
- (d) respiratory or skin sensitization; Respiratory No data available Skin No data available
- (e) germ cell mutagenicity; No data available
- (f) carcinogenicity; No data available
  - There are no known carcinogenic chemicals in this product
- (g) reproductive toxicity; No data available
- (h) STOT-single exposure; No data available
- (i) STOT-repeated exposure; No data available
- Target OrgansNo information available.
- (j) aspiration hazard; No data available

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Symptoms / effects,both acute and delayed Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

|  | SECTION 12. ECOLOGICAL INFORMATION  |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|
| Ecotoxicity effects  | Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.   |  |  |  |  |  |  |
| Persistence and Degradability  | No information available  |  |  |  |  |  |  |
| Bioaccumulative Potential  | No information available  |  |  |  |  |  |  |
| Mobility in soil   | No information available  |  |  |  |  |  |  |
| Endocrine Disruptor Information<br>Persistent Organic Pollutant<br>Ozone Depletion Potential | This product does not contain any known or suspected endocrine disruptors<br>This product does not contain any known or suspected substance<br>This product does not contain any known or suspected substance |  |  |  |  |  |  |
|  | SECTION 13. DISPOSAL CONSIDERATIONS   |  |  |  |  |  |  |
| Waste from Residues/Unused<br>Products   | Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.  |  |  |  |  |  |  |
| Contaminated Packaging   | Dispose of this container to hazardous or special waste collection point.   |  |  |  |  |  |  |
| Other Information  | Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms. |  |  |  |  |  |  |

# **SECTION 14. TRANSPORT INFORMATION**

# Road and Rail Transport

| UN-No<br>Proper Shipping Name<br>Technical Shipping Name<br>Hazard Class<br>Packing Group | UN3265<br>Corrosive liquid, acidic, organic, n.o.s.<br>(4-n-Propylbenzenesulfonyl chloride)<br>8<br>II |
|---|--|
| IMDG/IMO  |  |
| UN-No<br>Proper Shipping Name<br>Technical Shipping Name<br>Hazard Class<br>Packing Group | UN3265<br>Corrosive liquid, acidic, organic, n.o.s.<br>(4-n-Propylbenzenesulfonyl chloride)<br>8<br>II |
| IATA  |  |
| UN-No   | UN3265   |

Proper Shipping Name Technical Shipping Name UN3265 Corrosive liquid, acidic, organic, n.o.s. (4-n-Propylbenzenesulfonyl chloride)

# 4-n-Propylbenzenesulfonyl chloride

| Hazard Class  |  |
|---------------|--|
| Packing Group |  |

Special Precautions for User

No special precautions required

# **SECTION 15. REGULATORY INFORMATION**

## **International Inventories**

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

| Component                               | The   | List of | TCSI | IECSC | EINECS | TSCA | DSL | PICCS | ENCS | ISHL | AICS | KECL |
|---|---|---------|------|-------|--------|------|-----|-------|------|------|------|------|
|   | Inventory of<br>Hazardous<br>Chemicals<br>(2015<br>Edition) |         |      |       |        |      |     |       |      |      |      |      |
| 4-Propylbenzene-1-sul<br>fonyl chloride | -   | -       | Х    | -     | -      | -    | -   | -     | -    |      | -    | -    |

## **National Regulations**

# SECTION 16. OTHER INFORMATION

| Prepared By      | Health, Safety and Environmental Department        |
|------------------|--|
| Revision Date    | 01-May-2024  |
| Revision Summary | New emergency telephone response service provider. |

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# Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

# Legend

| CAS - Chemical Abstracts Service<br>EINECS/ELINCS - European Inventory of Existing Commercial Chemical<br>Substances/EU List of Notified Chemical Substances<br>PICCS - Philippines Inventory of Chemicals and Chemical Substances<br>IECSC - Chinese Inventory of Existing Chemical Substances<br>KECL - Korean Existing and Evaluated Chemical Substances       | TSCA - United States Toxic Substances Control Act Section 8(b)<br>Inventory<br>DSL/NDSL - Canadian Domestic Substances List/Non-Domestic<br>Substances List<br>ENCS - Japanese Existing and New Chemical Substances<br>AICS - Australian Inventory of Chemical Substances<br>NZIOC - New Zealand Inventory of Chemicals                            |
|---|--|
| <ul> <li>WEL - Workplace Exposure Limit</li> <li>ACGIH - American Conference of Governmental Industrial Hygienists</li> <li>DNEL - Derived No Effect Level</li> <li>RPE - Respiratory Protective Equipment</li> <li>LC50 - Lethal Concentration 50%</li> <li>NOEC - No Observed Effect Concentration</li> <li>PBT - Persistent, Bioaccumulative, Toxic</li> </ul> | <ul> <li>TWA - Time Weighted Average</li> <li>IARC - International Agency for Research on Cancer</li> <li>PNEC - Predicted No Effect Concentration</li> <li>LD50 - Lethal Dose 50%</li> <li>EC50 - Effective Concentration 50%</li> <li>POW - Partition coefficient Octanol:Water</li> <li>vPvB - very Persistent, very Bioaccumulative</li> </ul> |
| ICAO/IATA - International Civil Aviation Organization/International Air<br>Transport Association<br>ADR - European Agreement Concerning the International Carriage of<br>Dangerous Goods by Road<br>OECD - Organisation for Economic Co-operation and Development<br>BCF - Bioconcentration factor  | IMO/IMDG - International Maritime Organization/International Maritime<br>Dangerous Goods Code<br>MARPOL - International Convention for the Prevention of Pollution from<br>Ships<br>ATE - Acute Toxicity Estimate<br>VOC - (Volatile Organic Compound)   |

## Key literature references and sources for data

# 4-n-Propylbenzenesulfonyl chloride

https://echa.europa.eu/information-on-chemicals Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

# 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, use, processing, storage, transportation, disposal and release 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

# End of Safety Data Sheet