

ALFAAA13529

## 4-Methylbenzenesulphonylhydrazide

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

|                               |  |
|-------------------------------|--|
| 产品说明:<br>Product Description: | 对甲苯磺酰肼<br>4-Methylbenzenesulphonylhydrazide  |
| Cat No. :                     | A13529   |
| Synonyms                      | p-Toluenesulfonhydrazide   |
| CAS No                        | 1576-35-8  |
| Molecular Formula             | C7 H10 N2 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<br>Powder Solid   | Appearance<br>Off-white | Odor<br>Odorless |
| <b>Emergency Overview</b><br>Heating may cause a fire. Toxic if swallowed. Causes serious eye irritation. Risk of explosion if heated under confinement. |                         |                  |

#### Classification of the substance or mixture

|                                   |            |
|-----------------------------------|------------|
| Self-reactive substances          | Type D     |
| Acute Oral Toxicity               | Category 3 |
| Serious Eye Damage/Eye Irritation | Category 2 |

#### Label Elements



Signal Word

Danger

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

**Hazard Statements**

H242 - Heating may cause a fire  
H301 - Toxic if swallowed  
H319 - Causes serious eye irritation

**Precautionary Statements****Prevention**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P220 - Keep away from clothing and other combustible materials  
P234 - Keep only in original packaging  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product

**Response**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor  
P337 + P313 - If eye irritation persists: Get medical advice/attention  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P330 - Rinse mouth  
P380 - Evacuate area  
P375 - Fight fire remotely due to the risk of explosion

**Storage**

P410 - Protect from sunlight  
P420 - Store away from other materials  
P403 + P235 - Store in a well-ventilated place. Keep cool  
P405 - Store locked up

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Physical and Chemical Hazards**

Heating may cause a fire. Risk of explosion if heated under confinement.

**Health Hazards**

Toxic if swallowed. Causes serious eye irritation.

**Environmental hazards**

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants. Will likely be mobile in the environment due to its water solubility. The product is water soluble, and may spread in water systems.

Toxic to terrestrial vertebrates. This product does not contain any known or suspected endocrine disruptors.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Component                                  | CAS No    | Weight % |
|--|-----------|----------|
| Benzenesulfonic acid, 4-methyl-, hydrazide | 1576-35-8 | >95      |

**SECTION 4. FIRST AID MEASURES****General Advice**

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

**Eye Contact**

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

**Inhalation**

Remove to fresh air. If not breathing, give artificial respiration. 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. Immediate medical attention is required.

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

**Ingestion**

Do NOT induce vomiting. Call a physician or poison control center immediately.

**Most important symptoms and effects**

None reasonably foreseeable.

**Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Notes to Physician**

Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

CO<sub>2</sub>, 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**

Flammable. Combustible material.

**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. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

**Environmental Precautions**

Should not be released into the environment.

**Methods for Containment and Clean Up**

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

**Storage**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Flammables area.

**Specific Use(s)**

Use in laboratories

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control Parameters

#### Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

#### Exposure Controls

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

#### Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

| Glove material                                      | Breakthrough time                 | Glove thickness | EU standard | Glove comments        |
|---|-----------------------------------|-----------------|-------------|-----------------------|
| Nitrile rubber<br>Neoprene<br>Natural rubber<br>PVC | See manufacturers recommendations | -               | EN 374      | (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 compatibility, 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

**Respiratory Protection** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**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  
**Recommended Filter type:** Particulates filter conforming to EN 143

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Particle filtering: EN149:2001  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

|  |                                 |  |
|--|---------------------------------|--|
| <b>Appearance</b>                              | Off-white                       |  |
| <b>Physical State</b>                          | Powder Solid                    |  |
| <b>Odor</b>                                    | Odorless                        |  |
| <b>Odor Threshold</b>                          | No data available               |  |
| <b>pH</b>                                      | No information available        |  |
| <b>Melting Point/Range</b>                     | 109 - 113 °C / 228.2 - 235.4 °F |  |
| <b>Softening Point</b>                         | No data available               |  |
| <b>Boiling Point/Range</b>                     | No information available        |  |
| <b>Flash Point</b>                             | No information available        | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>                        | Not applicable                  | Solid                                    |
| <b>Flammability (solid,gas)</b>                | No information available        |  |
| <b>Explosion Limits</b>                        | No data available               |  |
| <b>Vapor Pressure</b>                          | No data available               |  |
| <b>Vapor Density</b>                           | Not applicable                  | Solid                                    |
| <b>Specific Gravity / Density</b>              | No data available               |  |
| <b>Bulk Density</b>                            | No data available               |  |
| <b>Water Solubility</b>                        | 5 g/L (15°C)                    |  |
| <b>Solubility in other solvents</b>            | No information available        |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                                 |  |
| <b>Autoignition Temperature</b>                | No data available               |  |
| <b>Decomposition Temperature</b>               | No data available               |  |
| <b>Viscosity</b>                               | Not applicable                  | Solid                                    |
| <b>Explosive Properties</b>                    | No information available        |  |
| <b>Oxidizing Properties</b>                    | No information available        |  |
| <b>Molecular Formula</b>                       | C7 H10 N2 O2 S                  |  |
| <b>Molecular Weight</b>                        | 186.23                          |  |

### SECTION 10. STABILITY AND REACTIVITY

|                                 |  |
|---------------------------------|--|
| <b>Stability</b>                | Risk of explosion if heated under confinement.   |
| <b>Hazardous Reactions</b>      | None under normal processing.  |
| <b>Hazardous Polymerization</b> | Hazardous polymerization does not occur.   |
| <b>Conditions to Avoid</b>      | Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. |
| <b>Materials to avoid</b>       | Acids. Bases. Strong oxidizing agents. Finely powdered metals.   |

**Hazardous Decomposition Products** Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Product Information

##### (a) acute toxicity;

| Component                                  | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|--|--------------------------|-------------|-----------------|
| Benzenesulfonic acid, 4-methyl-, hydrazide | LD50 = 283 mg/kg ( Rat ) |             |                 |

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 2

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

**(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 Organs** No information available.**(j) aspiration hazard;** Not applicable  
Solid**Other Adverse Effects** The toxicological properties have not been fully investigated.**Symptoms / effects, both acute and delayed** No information available

### SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity effects** Do not empty into drains.**Persistence and Degradability**  
**Persistence** Soluble in water, Persistence is unlikely, based on information available.**Bioaccumulative Potential** Bioaccumulation is unlikely**Mobility in soil** The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility Highly mobile in soils**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

### SECTION 13. DISPOSAL CONSIDERATIONS

**Waste from Residues/Unused 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. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

**SECTION 14. TRANSPORT INFORMATION****Road and Rail Transport**

**UN-No** UN3226  
**Proper Shipping Name** SELF-REACTIVE SOLID TYPE D  
**Technical Shipping Name** 4-Methylbenzenesulphonylhydrazide  
**Hazard Class** 4.1

**IMDG/IMO**

**UN-No** UN3226  
**Proper Shipping Name** SELF-REACTIVE SOLID TYPE D  
**Technical Shipping Name** 4-Methylbenzenesulphonylhydrazide  
**Hazard Class** 4.1

**IATA**

**UN-No** UN3226  
**Proper Shipping Name** SELF-REACTIVE SOLID TYPE D  
**Technical Shipping Name** 4-Methylbenzenesulphonylhydrazide  
**Hazard Class** 4.1

**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 Inventory of Hazardous Chemicals (2015 Edition) | List of dangerous goods GB 12268 - 2012 | TCSI | IECSC | EINECS    | TSCA | DSL | PICCS | ENCS | ISHL | AICS | KECL      |
|--|---|---|------|-------|-----------|------|-----|-------|------|------|------|-----------|
| Benzenesulfonic acid, 4-methyl-, hydrazide | -   | -                                       | X    | X     | 216-407-3 | X    | X   | X     | X    | X    | X    | 2008-2-26 |

**National Regulations****SECTION 16. OTHER INFORMATION**

**Prepared By** Health, Safety and Environmental Department  
**Creation Date** 26-Sep-2005  
**Revision Date** 22-Apr-2024  
**Revision Summary** New emergency telephone response service provider.

**Training Advice**

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

# SAFETY DATA SHEET

## 4-Methylbenzenesulphonylhydrazide

hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### **Key literature references and sources for data**

<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**