

ALFAA39273

## 1,2-Bis(dimethoxyphosphoryl)benzene

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

产品说明: 1,2-双(二甲氧基磷酸基)苯  
Product Description: 1,2-Bis(dimethoxyphosphoryl)benzene

Cat No. : 39273  
CAS No 15104-46-8  
Molecular Formula C10 H16 O6 P2

Supplier Avocado Research Chemicals Ltd.  
(Part of Thermo Fisher Scientific)  
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**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

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Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Solid Crystalline

**Appearance**  
No information available

**Odor**  
No information available

**Emergency Overview**  
Toxic if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

#### Classification of the substance or mixture

|  |            |
|--|------------|
| Acute Oral Toxicity                                | Category 3 |
| Skin Corrosion/Irritation                          | Category 2 |
| Serious Eye Damage/Eye Irritation                  | Category 2 |
| Specific target organ toxicity - (single exposure) | Category 3 |

#### Label Elements



Signal Word

Danger

# SAFETY DATA SHEET

## 1,2-Bis(dimethoxyphosphoryl)benzene

**Hazard Statements**

H301 - Toxic if swallowed  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a POISON CENTER or doctor if you feel unwell  
P330 - Rinse mouth  
P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up

**Disposal**

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

**Physical and Chemical Hazards**

None identified.

**Health Hazards**

Toxic if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

**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 % |
|-------------------------------------|------------|----------|
| 1,2-Bis(dimethoxyphosphoryl)benzene | 15104-46-8 | <=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**

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

**Skin Contact**

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

**Inhalation**

Remove to fresh air. 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. If not breathing, give artificial respiration.

**Ingestion**

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

# SAFETY DATA SHEET

## 1,2-Bis(dimethoxyphosphoryl)benzene

**Most important symptoms and effects**

None reasonably foreseeable.

**Self-Protection of the First Aider**

No special precautions required.

**Notes to Physician**

Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**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.

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

**Environmental Precautions**

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

**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 container tightly closed in a dry and well-ventilated place.

**Specific Use(s)**

Use in laboratories

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**

# SAFETY DATA SHEET

## 1,2-Bis(dimethoxyphosphoryl)benzene

### 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

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 | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Nitrile rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Neoprene       | recommendations   |                 |             |                       |
| Natural rubber |                   |                 |             |                       |
| PVC            |                   |                 |             |                       |

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

**Respiratory Protection** 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  
**Recommended Filter type:** Particle filter

**Small scale/Laboratory use** Maintain adequate ventilation

**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

**Physical State** Solid Crystalline

**Odor** No information available

**Odor Threshold** No data available

**pH** No information available

**Melting Point/Range** 80 - 82 °C / 176 - 179.6 °F

**Softening Point** No data available

**Boiling Point/Range** No information available

**Flash Point** No information available

**Method -** No information available

**Evaporation Rate** Not applicable

Solid

**Flammability (solid,gas)** No information available

**Explosion Limits** No data available

# SAFETY DATA SHEET

## 1,2-Bis(dimethoxyphosphoryl)benzene

|   |                          |       |
|---|--------------------------|-------|
| Vapor Pressure                          | No data available        |       |
| Vapor Density                           | Not applicable           | Solid |
| Specific Gravity / Density              | No data available        |       |
| Bulk Density                            | No data available        |       |
| Water Solubility                        | No information available |       |
| Solubility in other solvents            | No information available |       |
| Partition Coefficient (n-octanol/water) |                          |       |
| Autoignition Temperature                | No data available        |       |
| Decomposition Temperature               | No data available        |       |
| Viscosity                               | Not applicable           | Solid |
| Explosive Properties                    | No information available |       |
| Oxidizing Properties                    | No information available |       |
| Molecular Formula                       | C10 H16 O6 P2            |       |
| Molecular Weight                        | 294.18                   |       |

### SECTION 10. STABILITY AND REACTIVITY

|                          |                                 |
|--------------------------|---------------------------------|
| Stability                | Stable under normal conditions. |
| Hazardous Reactions      | None under normal processing.   |
| Hazardous Polymerization | No information available.       |
| Conditions to Avoid      | None known.                     |
| Materials to avoid       | No information available.       |

Hazardous Decomposition Products None under normal use conditions.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Product Information

|  |   |
|--|---|
| (a) acute toxicity;                    |   |
| (b) skin corrosion/irritation;         | Category 2  |
| (c) serious eye damage/irritation;     | Category 2  |
| (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;              | Category 3  |

# SAFETY DATA SHEET

## 1,2-Bis(dimethoxyphosphoryl)benzene

|  |                           |
|--|---------------------------|
| Results / Target organs                    | Respiratory system        |
| (i) STOT-repeated exposure;                | No data available         |
| Target Organs                              | No information available. |
| (j) aspiration hazard;                     | Not applicable<br>Solid   |
| Symptoms / effects, both acute and delayed | No information available  |

### 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 | 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.  |
| 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.  |

### SECTION 14. TRANSPORT INFORMATION

#### Road and Rail Transport

|                         |   |
|-------------------------|---|
| UN-No                   | UN3464  |
| Proper Shipping Name    | ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. |
| Technical Shipping Name | (1,2-Bis(dimethoxyphosphoryl)benzene)           |
| Hazard Class            | 6.1   |
| Packing Group           | III   |

#### IMDG/IMO

|                         |   |
|-------------------------|---|
| UN-No                   | UN3464  |
| Proper Shipping Name    | ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. |
| Technical Shipping Name | (1,2-Bis(dimethoxyphosphoryl)benzene)           |
| Hazard Class            | 6.1   |

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## 1,2-Bis(dimethoxyphosphoryl)benzene

Packing Group III

### IATA

UN-No UN3464  
Proper Shipping Name ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.\*  
Technical Shipping Name (1,2-Bis(dimethoxyphosphoryl)benzene)  
Hazard Class 6.1  
Packing Group III

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).

### 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.

### Training Advice

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

### 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/NDSL** - 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)

# SAFETY DATA SHEET

## 1,2-Bis(dimethoxyphosphoryl)benzene

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**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**