

Creation Date 25-Jun-2009

Revision Date 23-Mar-2012

Revision Number 3

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

### Product Identifier

**Product Description:** 1,2-Bis(diethylphosphino)ethane  
**Cat No.** 383360000; 383360010; 383360050

### Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

### Details of the supplier of the safety data sheet

#### Company

Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

**E-mail address** begel.sdsdesk@thermofisher.com

### Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01  
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99  
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300  
 CHEMTREC Phone Number, Europe: 001-703-527-3887

## SECTION 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

#### REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ systemic toxicity (single exposure)	Category 3
Pyrophoric solids.	Category 1

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

#### Symbol(s)

Xn - Harmful

F - Highly flammable

#### R-phrases

R17 - Spontaneously flammable in air

#### Risk Combination Phrases

R21/22 - Harmful in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

1,2-Bis(diethylphosphino)ethane

Revision Date 23-Mar-2012

## SECTION 2. HAZARDS IDENTIFICATION

### Label Elements



### Signal Word

**Danger**

### Hazard Statements

H319 - Causes serious eye irritation  
H315 - Causes skin irritation  
H302 - Harmful if swallowed  
H312 - Harmful in contact with skin  
H335 - May cause respiratory irritation  
H250 - Catches fire spontaneously if exposed to air

### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

### Other Hazards

No information available.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	67/548/EEC Classification	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
1,2-Bis(diethylphosphino)ethane 6411-21-8		98	6411-21-8	F; R17 Xn; R21/22 Xi; R36/37/38	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Pyr. Liq. 1 (H250)	-

1,2-Bis(diethylphosphino)ethane

Revision Date 23-Mar-2012

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

## SECTION 4. FIRST AID MEASURES

### Description of first aid measures

#### **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. Immediate medical attention is required.

#### **Ingestion**

Do not induce vomiting. Call a physician or Poison Control Center immediately.

#### **Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

#### **Notes to Physician**

Treat symptomatically

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Dry chemical, soda ash, lime or sand.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

#### **Special hazards arising from the substance or mixture**

Pyrophoric. Spontaneously flammable in air.. Risk of ignition. Keep product and empty container away from heat and sources of ignition.

#### **Advice for fire-fighters**

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, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.

#### **Environmental precautions**

**1,2-Bis(diethylphosphino)ethane**

**Revision Date** 23-Mar-2012

Should not be released into the environment.

## **Methods and material for containment and cleaning up**

Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable, closed containers for disposal..

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Use only under a chemical fume hood. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Handle under an inert atmosphere.

### **Conditions for safe storage, including any incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Store under an inert atmosphere. Flammables area.

### **Specific End Uses**

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

#### **Exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

#### **Derived No Effect Level (DNEL)**

No information available.

#### **Predicted No Effect Concentration (PNEC)**

No information available.

### **Exposure controls**

#### **Engineering Measures**

Use only under a chemical fume hood Ensure that eyewash stations and safety showers are close to the workstation location Use explosion-proof electrical/ventilating/lighting/equipment

#### **Personal protective equipment**

##### **Eye Protection**

Safety glasses with side-shields

##### **Hand Protection**

Protective gloves

##### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

##### **Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

#### **Environmental exposure controls**

No information available.

1,2-Bis(diethylphosphino)ethane

Revision Date 23-Mar-2012

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear
odor	pungent
pH	No information available.
Boiling Point/Range	124 - 126°C / 255.2 - 258.8°F @ 10 mmHg
Melting Point/Range	No information available.
Flash Point	Not applicable
Autoignition Temperature	No information available.
Water Solubility	Insoluble
Specific Gravity	0.884
Molecular Formula	C <sub>10</sub> H <sub>24</sub> P <sub>2</sub>
Molecular Weight	206.25

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

Reactive Hazard	Yes
Chemical Stability	

Air sensitive.

### Possibility of Hazardous Reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions .	Pyrophoric: Spontaneously flammable in air.

### Conditions to Avoid

Incompatible products, Heat, flames and sparks, Exposure to air.

### Incompatible Materials

Strong oxidizing agents, Halogens.

### Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Oxides of phosphorus.

## SECTION 11. TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Acute Toxicity

Product Information	No acute toxicity information is available for this product
---------------------	---

1,2-Bis(diethylphosphino)ethane

Revision Date 23-Mar-2012

**SECTION 11. TOXICOLOGICAL INFORMATION****Component Information****Chronic Toxicity****Carcinogenicity**

There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

No information available

**Reproductive Effects**

No information available.

**Developmental Effects**

No information available.

**Target Organs**

Eyes Skin Respiratory system Gastrointestinal tract (GI)

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Endocrine Disruptor Information**

None known

**SECTION 12. ECOLOGICAL INFORMATION****Toxicity****Ecotoxicity effects**

Do not empty into drains

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment****Other adverse effects**

No information available

**SECTION 13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste from Residues / Unused Products**

Dispose of in accordance with local regulations

**Contaminated Packaging**

Empty containers should be taken to local recyclers for disposal

1,2-Bis(diethylphosphino)ethane

Revision Date 23-Mar-2012

## SECTION 14. TRANSPORT INFORMATION

### IMDG/IMO

UN-No	UN2845
Hazard Class	4.2
Packing Group	I
Proper Shipping Name	Pyrophoric liquid, organic, n.o.s

### ADR

UN-No	UN2845
Hazard Class	4.2
Packing Group	I
Proper Shipping Name	Pyrophoric liquid, organic, n.o.s

### IATA

UN-No	UN2845
Hazard Class	4.2
Proper Shipping Name	Pyrophoric liquid, organic, n.o.s , FORBIDDEN FOR IATA TRANSPORT

## SECTION 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

#### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**CHINA** - China Inventory of Existing Chemical Substances  
**AICS** - Inventory of Chemical Substances  
**KECL** - Existing and Evaluated Chemical Substances

#### Chemical Safety Assessment

**1,2-Bis(diethylphosphino)ethane****Revision Date** 23-Mar-2012**SECTION 16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R17 - Spontaneously flammable in air

R21/22 - Harmful in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

**Revision Date**

23-Mar-2012

**Revision Summary**

(M)SDS sections updated, 14.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**