

# SAFETY DATA SHEET

Preparation Date: 3/19/2015

Revision Date: Not Applicable

Revision Number: Not Applicable

**Product identifier**

**Product code:** B2216  
**Product Name:** BIS(2-ETHYLHEXYL) HYDROGEN PHOSPHATE

**Other means of identification**

**Synonyms:**  
Di(2-ethylhexyl)orthophosphoric acid  
Di(2-ethylhexyl)phosphate  
Di-2(ethylhexyl)phosphoric acid  
Diisooctyl acid phosphate  
2-Ethyl-1-hexanol hydrogen phosphate  
Bis(2-ethylhexyl)hydrogen phosphate  
Bis(2-ethylhexyl)orthophosphoric acid  
Bis(2-ethylhexyl)phosphate  
Bis(2-ethylhexyl)phosphoric acid

**CAS #:** 298-07-7  
**RTECS #** TB7875000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Additive to lubrication oils.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

## 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

**Label elements**

## Danger

### Hazard statements

Harmful in contact with skin

Causes severe skin burns and eye damage



### Hazards not otherwise classified (HNOC)

Not Applicable

### Other hazards

May be harmful if swallowed

### Precautionary Statements - Prevention

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

### Precautionary Statements - Response

Specific measures (see .? on this label)

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

Call a POISON CENTER or doctor/physician if you feel unwell

Wash contaminated clothing before reuse

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

### Precautionary Statements - Storage

Store locked up

### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Bis(2-ethylhexyl) Hydrogen Phosphate 298-07-7	298-07-7	100	*

## 4. FIRST AID MEASURES

### First aid measures

#### **General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

#### **Skin Contact:**

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

#### **Eye Contact:**

Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

#### **Inhalation:**

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce 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. Call a physician immediately.

#### **Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Centre immediately. Rinse mouth with water. If the person is conscious and can swallow, has a strong gag reflex and does not drool, give water to drink for dilution of the acid.

### Most important symptoms and effects, both acute and delayed

#### **Symptoms**

Severe skin and eye irritation or burns. Redness and burning sensation of the skin, pain, blisters. Redness, pain and burns of the eyes. Causes digestive (gastrointestinal) tract irritation. May cause gastrointestinal (digestive) tract burns. Can burn mouth, throat, and stomach. Burning sensation in the mouth and stomach. Burning sensation of the respiratory tract.

### Indication of any immediate medical attention and special treatment needed

#### **Notes to Physician:**

Treat symptomatically

#### **Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

## 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### **Suitable Extinguishing Media:**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

#### **Unsuitable Extinguishing Media:**

No information available.

### Specific hazards arising from the chemical

#### **Hazardous Combustion Products:**

Carbon monoxide; Carbon dioxide; phosphorus oxides

#### **Specific hazards:**

May be combustible at high temperatures. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated.

### Special Protective Actions for Firefighters

#### **Specific Methods:**

No information available.

**Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

### Methods and material for containment and cleaning up

**Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

**Methods for cleaning up**

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Technical Measures/Precautions:**

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

**Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities****Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents. Bases.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****National occupational exposure limits****United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Bis(2-ethylhexyl) Hydrogen Phosphate - 298-07-7	None	None	None	None

## Canada

Components	Alberta	British Columbia	Ontario	Quebec
Bis(2-ethylhexyl) Hydrogen Phosphate - 298-07-7	None	None	None	None

## Australia and Mexico

Components	Australia	Mexico
Bis(2-ethylhexyl) Hydrogen Phosphate 298-07-7	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

**Eye protection:** Goggles. Face-shield.

**Skin and body protection:** Chemical resistant protective suit. Gloves. boots.

**Respiratory protection:** Suitable respiratory equipment:

**Hygiene measures:** Avoid contact with skin, eyes and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical state:</b> Liquid.	<b>Appearance:</b> Viscous.	<b>Color:</b> Clear. Colorless.
<b>Odor:</b> Odorless.	<b>Taste</b> No information available	<b>Formula:</b> C16H35O4P
<b>Molecular/Formula weight:</b> 322.43	<b>Flash point (°C):</b> 196	<b>Flashpoint (°C/°F):</b> 196°C/385°F
<b>Flash Point Tested according to:</b> Open cup	<b>Lower Explosion Limit (%):</b> No information available	<b>Upper Explosion Limit (%):</b> No information available
<b>Autoignition Temperature (°C/°F):</b> 248°C/478°F	<b>pH:</b> No information available	<b>Melting point/range(°C/°F):</b> -50°C/-58°F
<b>Boiling point/range(°C/°F):</b> 155°C/311°F @ 0.015 mmHg	<b>Decomposition temperature(°C/°F):</b> No information available	<b>Bulk density:</b> No information available
<b>Specific gravity:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> 0.01	<b>Density (g/cm3):</b> 0.975 @ 25 deg. C
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> 2.67-6.07	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Soluble in Benzene Soluble in Hexane Very slightly soluble in water	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Bases.

**Hazardous decomposition products:** When heated to decomposition it emits toxic fumes. Phosphorus oxides. Carbon monoxide. Carbon dioxide.

### Other Information

**Corrosivity:** Mildly corrosive to most metals

**Special Remarks on Corrosivity:** No information available

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## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Principal Routes of Exposure:

Skin. Ingestion. Inhalation. Eyes.

### Acute Toxicity

#### Component Information

*Bis(2-ethylhexyl) Hydrogen Phosphate - 298-07-7*

**LD50/oral/rat** = 4940 mg/kg

**LD50/oral/mouse** = No information available

**LD50/dermal/rabbit** = 1250 uL/kg

1219-1250 mg/kg

**LD50/dermal/rat** = No information available

**LC50/inhalation/rat** = No information available

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = No information available

#### Product Information

**LD50/oral/rat** =

VALUE- Acute Tox Oral = 4940mg/kg

**LD50/oral/mouse** =

Value - Acute Tox Oral = No information available

**LD50/dermal/rabbit**

VALUE-Acute Tox Dermal = 1219mg/kg

**LD50/dermal/rat**

VALUE -Acute Tox Dermal = No information available

**LC50/inhalation/rat**

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

**LC50/Inhalation/mouse**

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

### Symptoms

#### Skin Contact:

Severe skin irritation. Causes burns.

#### Eye Contact:

Severe eye irritation. Causes burns. Possible eye damage.

#### Inhalation

Irritating to respiratory system. Symptoms may include burning sensation, coughing and sore throat.

#### Ingestion

Causes digestive or gastrointestinal tract burns. Corrosive to the mouth, throat, and stomach.

#### Aspiration hazard

No information available

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## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** Repeated exposure may cause bronchitis to develop with cough, phlegm, and /or shortness of breath.

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Bis(2-ethylhexyl) Hydrogen Phosphate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

### **Specific Target Organ Toxicity**

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Target Organs:** Lungs.

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Bis(2-ethylhexyl) Hydrogen Phosphate - 298-07-7*

**Freshwater Fish Species Data:** 20 mg/L LC50 *Oncorhynchus mykiss* 96 h static 1

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

## 13. DISPOSAL CONSIDERATIONS

### **Disposal Methods**

#### **Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.



**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Bis(2-ethylhexyl) Hydrogen Phosphate	None	None	None	None

**14. TRANSPORT INFORMATION****DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** Not applicable  
**Packing Group:** None  
**ERG No:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available

**TDG (Canada)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

**ADR**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available  
**MFAG:** No information available  
**Maximum Quantity:** No information available

**RID**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

## 14. TRANSPORT INFORMATION

**Classification Code:** No information available  
**Description:** No information available

### ICAO

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

### IATA

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Bis(2-ethylhexyl) Hydrogen Phosphate</i>	Present	Present KE-28542	Present	Present (2)-1986 (2)-2014	Present[22444 ]	Present	Present 206-056-4

### U.S. Regulations

*Bis(2-ethylhexyl) Hydrogen Phosphate*

**New Jersey RTK Hazardous Substance List:** Present

### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

#### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

#### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Bis(2-ethylhexyl) Hydrogen Phosphate</i>	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
<i>Bis(2-ethylhexyl) Hydrogen Phosphate</i>	None	None	None	None	None

### U.S. TSCA

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Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Bis(2-ethylhexyl) Hydrogen Phosphate	Not Applicable	10/29/199012/19/1995

## Canada

### WHMIS hazard class:

E Corrosive material

### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Bis(2-ethylhexyl) Hydrogen Phosphate	1 %

## Inventory

Components	Canada (DSL)	Canada (NDSL)
Bis(2-ethylhexyl) Hydrogen Phosphate	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Bis(2-ethylhexyl) Hydrogen Phosphate	Not listed	Not listed

## EU Classification

### R-phrase(s)

R34 - Causes burns.

R21 - Harmful in contact with skin.

### S -phrase(s)

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	Classification	Concentration Limits:	Safety Phrases
Bis(2-ethylhexyl) Hydrogen Phosphate		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

### Indication of danger:

C - Corrosive.

Xn - Harmful.



## 16. OTHER INFORMATION

**Preparation Date:** 3/19/2015  
**Revision Date:** Not Applicable  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**