

Printing date 05/13/2006

Revision number: 2

Reviewed on 05/05/2006

**1 Identification of substance**

- **Product details**
- **Trade name:** PHOSFLEX 362
- **Application of the substance / the preparation** Flame retardant plasticizer
- **Manufacturer/Supplier:**  
Supresta  
420 Saw Mill River Road  
Ardsley, NY 10502  
USA
- **Information department:**  
Product safety department.  
1-914-269-5900 (9:00 am - 5:00 pm EDT)
- **Emergency information:**  
Medical: PROSAR 1-888-875-1685 (24HRS)  
Transportation: CHEMTREC 1-800-424-1685 (24 HRS)

**2 Composition/Data on components**

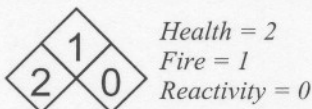
- **Chemical characterization**
- **Description:** Substance is a compound and/or mixture.

· <b>Chemical Components:</b>		
1241-94-7	2-ethylhexyl diphenyl phosphate	90 - 95%
115-86-6	Triphenyl phosphate	2 - 5%

- **Carcinogenicity status (LARC, NTP, OSHA)**  
This product does not contain a listed carcinogen at a concentration of 0.1% or greater.

**3 Hazards identification**

- **NFPA ratings (0=minimal, 1=slight, 2=moderate, 3=severe, 4=extreme)**



- **HMIS ratings (0=minimal, 1=slight, 2=moderate, 3=serious, 4=severe)**

HEALTH	1	Health = 1
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

- **Additional information:**  
Warning!  
Causes skin and eye irritation.  
May release harmful vapors at elevated temperatures.  
May cause respiratory tract irritation.

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MARKETED BY  
**HARWICK STANDARD  
DISTRIBUTION CORPORATION**  
60 S. Seiberling Street • Akron, Ohio 44305

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## 4 First aid measures

- **After inhalation:**

Remove to fresh air. If not breathing, clear victim's airway and start artificial respiration. If victim is breathing, supplemental oxygen may be given from a demand-type or continuous-flow inhaler, preferably with a physician's advice. Get medical attention immediately.

- **After skin contact:**

Immediately remove and discard contaminated clothing and shoes. Under a safety shower, wash all affected areas with plenty of soap and water for at least 15 minutes. Do not attempt to neutralize with chemical agents. Obtain medical attention immediately.

- **After eye contact:**

Immediately flush eyes with large amounts of water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Do not attempt to neutralize the material. Get medical attention immediately.

- **After swallowing:**

Get medical attention by calling a physician or a poison control center immediately. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, keep head below hips to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

## 5 Fire fighting measures

- **Suitable extinguishing agents:**

Use water fog or spray, dry chemical, foam or carbon dioxide extinguishing agents.

- **Special hazards caused by the material, its products of combustion or resulting gases:**

Decomposition of this product under fire conditions can produce toxic and corrosive oxides of phosphorus and toxic oxides of carbon.

This product is not defined as flammable or combustible. However, it may decompose under fire conditions to give off toxic materials such as phosphorus oxides and flammable organic substituents. The product is self-extinguishing once the source of ignition is removed.

- **Protective equipment:**

As in any fire, prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from the fire area. Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. If possible, move containers from the fire area. If not leaking, keep fire exposed containers cool with a water fog or spray to prevent rupture due to excessive heat. High pressure water may spread product from broken containers increasing contamination or fire hazard. Dike fire control water for later disposal. Do not allow contaminated water to enter waterways.

## 6 Accidental release measures

- **Personnel-related safety precautions:**

Isolate spill area and restrict nonessential personnel. All personnel involved in spill cleanup should follow appropriate industrial hygiene practices (see Section 8). Particular danger of slipping on leaked/spilled product.

- **Measures for environmental protection:**

Stop source of spill if possible. Dike area to prevent spill from spreading.

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· **Measures for cleaning/collecting:**

Soak up liquid with a suitable absorbent such as clay, sawdust, or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Cover spill area with a slurry of powdered household detergent and water. Use stiff brush to work slurry into cracks and crevices. Allow to stand for 2-3 minutes, then flush with water. Dike water for later disposal. Do not allow contaminated water to enter waterways or sewers.

## 7 Handling and storage

· **Handling:**

· **Information for safe handling:**

Wear respiratory protection and protective clothing including a face shield and goggles or similar protection when handling this product (see Section 8). Wash thoroughly with soap and plenty of water after handling.

Empty containers may retain product residues. Follow all warnings and precautions even after container is empty.

· **Information about protection against explosions and fires:** The product is not flammable.

· **Storage:**

· **Suggested Storage Conditions:**

This material is noncorrosive to glass or metals and is generally stored and shipped in materials of carbon steel construction. However, the product has plasticizing properties. It may soften or deteriorate certain plastics and elastomers (particularly vinyl-based and synthetic rubbers). It is not corrosive to phenolic or epoxy linings.

· **Information about storage in one common storage facility:**

Store away from foodstuffs and animal feed. Containers should be stored in a cool, dry, well-ventilated area away from flammable or oxidizing materials and sources of heat or flame.

· **Further information about storage conditions:** Containers should not be opened until ready for use.

## 8 Exposure controls and personal protection

· **Additional information about design of technical systems:**

At elevated processing temperatures or in the event that use conditions generate airborne vapor, aerosol or mist, the material should be handled in a well-ventilated area.

Where adequate ventilation is not available, respiratory protection should be used.

· **Additional Occupational Exposure Limit Values for possible hazards during processing:**

115-86-6 Triphenyl phosphate (2 - 5%)

PEL	3 mg/m <sup>3</sup> (OSHA)
TLV	3 mg/m <sup>3</sup> (ACGIH)
TWA	3 mg/m <sup>3</sup> (NIOSH)

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The primary routes of exposure to this product are skin contact and inhalation of mists or vapors.

· **Breathing equipment:**

Use a NIOSH-approved organic vapor/acid gas respirator (OVAG) with dust, mist and fume filters to reduce potential for inhalation exposure if use conditions generate vapor, mist or aerosol and adequate ventilation (e.g., outdoor or well ventilated area) is not available. Where exposure necessitates a higher level of protection use a NIOSH-approved, positive pressure, pressure demand, air-supplied respirator.

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**Protection of hands:**

Skin contact with liquid or its aerosol should be prevented through the use of suitable protective clothing, gloves and footwear selected with regard for use condition exposure potential.

· **Material of gloves** Neoprene gloves

**Eye protection:**

Eye contact with liquid or aerosol should be prevented through the use of chemical safety goggles and/or a face shield selected with regard for use condition exposure potential.

**Body protection:**

Safety showers, with quick opening valves which stay open and eye wash fountains or other means of washing the eyes with a gentle flow of cool to tepid tap water should be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freezeups in cold weather. Long sleeved clothing may be used to minimize skin contact.

**9 Physical and chemical properties**

· <b>Form:</b>	Oily liquid
· <b>Color:</b>	Clear
· <b>Odor:</b>	Odorless
· <b>Melting point/Melting range:</b>	Not determined
· <b>Boiling point/Boiling range:</b>	> 238 C Decomposes @ 239 C (@10 mmHg)
· <b>Pour point</b>	-54°C (-65°F)
· <b>Flash point:</b>	224°C (435°F) (Cleveland oc)
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Vapor pressure at 150°C (302°F):</b>	0.2 mmHG (1.6 @ 200C)
· <b>Density at 25°C (77°F):</b>	1.085 - 1.091
· <b>Solubility in / Miscibility with Water at 25°C (77°F):</b>	0.002 %
· <b>Viscosity:</b>	
<b>Dynamic at 25°C (77°F):</b>	16.4 cp
· <b>Additional information:</b>	Soluble-most organic solvents.

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

This product is stable at ambient temperatures and atmospheric pressure. It is not self-reactive and is not sensitive to static discharge or physical impact.

Prolonged storage at elevated temperatures should be avoided.

**Materials to be avoided:**

This product is incompatible with strong oxidizers, strong acids and strong alkalis. It hydrolyzes slowly at ambient temperatures in acidic or alkaline aqueous solutions.

· **Dangerous reactions** Hazardous polymerization is not expected to occur.

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· **Dangerous products of decomposition:**

*Under wet alkaline or acidic conditions, this product hydrolyzes slowly and nonviolently.*

## 11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	> 15800 mg/kg (rat)
		<i>Slightly toxic.</i>
Dermal	LD50	> 7900 mg/kg (rabbit)
Inhalation	LC50	3.0 mg/l (rat)
<i>For a 6-hr exposure to a nominal, heated (163 C) vapor concentration. No deaths were reported when rats were exposed to a heated (125 C) aerosol of 4.8 mg/l for 4-hrs.</i>		

· **Primary irritant effect:**

· **on the skin:**

*This product did produce primary skin irritation in human volunteers.*

*This material was found to be a mild irritant in rabbits.*

· **on the eye:** *May cause mild irritation.*

· **Sensitization:** *This product did not cause allergic skin reactions in tests with human volunteers.*

· **Inhalation:**

*Eye and respiratory irritation was observed in animals exposed to heated vapors in an inhalation test.*

· **Subchronic to chronic toxicity:**

*Rats and dogs fed 2-ethyl hexyl diphenyl phosphate in their diets for two years showed a decreased growth rate.*

· **Mutagenicity:**

*No genetic changes occurred in standard animal tests or in tests with bacterial and yeast cells for this product.*

· **Neurotoxicity:** *Neurotoxicity tests with chickens showed no neurotoxic effects.*

· **Reproductive effects:**

*No birth defects were noted in rats born to mothers fed doses that produced maternal toxicity. When pregnant rats were fed at high doses, offspring had lower body weight.*

## 12 Ecological information

· **Information about elimination (persistence and degradability):**

· **Other information:**

*A similar product had a half-life of 1 to 5 days and tested to be intermediate to readily biodegradable.*

· **Behavior in environmental systems:**

· **Components:**

*Hydrolysis rates for triphenyl phosphate, a product component, are:*

*at pH 9.5: half-life: 0.23 days*

*at pH 8.2: half-life: 7.5 days*

*At neutral and acidic pH: too slow to reliably measure.*

· **Ecotoxicological effects:**

· **Aquatic toxicity:**

*Triphenyl phosphate, a product component, is moderately toxic to midge larvae, bluegill, sunfish and algae. It is highly toxic to daphnia magna, rainbow trout, sheepshead minnow, fathead minnow and mysid shrimp.*

*LC50 (48-hr) | 0.5 mg/l (Midge larvae)*

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LC50 (96-hr)	0.15 mg/l (daphnia)
	0.2 mg/l (Algae)
	32 mg/l (Bluegill)
	14 mg/l (Fathead minnow)
	15 mg/l (Rainbow trout)

### 13 Disposal considerations

· **Product:**

· **Recommendation:**

Material that cannot be used or chemically reprocessed should be disposed of in accordance with all applicable federal, state and local regulations.

This product, if unused, does not meet the EPA's criteria as either a listed or characteristic hazardous waste under the Resource Conservations and Recovery Act (RCRA) as published in 40 CFR 261.

· **Uncleaned packagings:**

· **Recommendation:**

Product containers designed for single use should be thoroughly emptied before disposal. Containers should be drained of residual product before disposal. Empty containers should be disposed of in accordance with all applicable laws and regulations.

### 14 Transport information

· **DOT regulations:**



· **Hazard class:**

9

· **Identification number:**

UN3082

· **Packing group:**

III

· **Proper shipping name (technical name):** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Triphenyl Phosphate)

· **Label**

9, Marine Pollutant

· **Remarks:**

Not regulated for surface and air transport in non-bulk (< 119 gallons) packagings. This product contains triphenyl phosphate which is a Marine Pollutant per 49 CFR 172.101, Appendix B.

· **Maritime transport IMDG:**

· **Marine pollutant:**

Yes (PP)

### 15 Regulations:

· **Sara**

· **Section 355 (extremely hazardous substances):**

108-95-2	phenol	0.05%
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· **Section 313 (Specific toxic chemical listings):**

*This product does not contain a toxic chemical subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372 (annual Toxic Chemical Release Reporting).*

· **SARA Title III: Section 304 - CERCLA:**

*This product does not contain a hazardous substance regulated under Section 304 for emergency release notification (CERCLA List).*

· **TSCA (Toxic Substances Control Act):** Substance is listed.

· **TSCA Section 12(b) - Export Notification:**

*This product does not contain any chemicals subject to Section 12(b) export notification.*

· **Proposition 65**

· **Chemicals known to cause cancer:**

*None of the ingredients are listed.*

· **Chemicals known to cause reproductive toxicity for females:**

*None of the ingredients are listed.*

· **Chemicals known to cause reproductive toxicity for males:**

*None of the ingredients are listed.*

· **Chemicals known to cause developmental toxicity:**

*None of the ingredients are listed.*

· **OSHA status:**

*This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200)*

· **Resource Conservation and Recovery Act (RCRA):**

*This product is not considered to be a hazardous waste under RCRA (40 CFR 261).*

· **Canadian WHMIS Symbol(s):**



· **Canadian WHMIS Classification(s):** D2B

· **State Regulations:**

· **State Right-To-Know**

1241-94-7	2-ethylhexyl diphenyl phosphate	90 - 95%
115-86-6	Triphenyl phosphate	2 - 5%
108-95-2	phenol	0.05%

· **Other regulations, limitations and prohibitive regulations**

*This product complies with FDA regulations for use in plastic products that are intended for contact with food items in Title 21, Sections 175.105, 175.300, 175.320, 176.170 and 181.27 of the Code of Federal Regulations.*

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### 16 Other information

*This information in this material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. All information concerning this product and/or suggestions for handling and use contained herein are offered in good faith and are believed to be reliable as of the date of publication. However, no warranty is made as to the accuracy of and/or sufficiency of such information and/or suggestions as to the merchantability or fitness of the product for any particular purpose, or that any suggested use will not infringe any patent. Nothing in here shall be construed as granting or extending any license under any patent. Buyer must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date of this document is more than three years old, call to make certain that this sheet is current.*

**Department issuing MSDS:** Product safety department (Tel.: 914 269-5900)

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