

# MATERIAL SAFETY DATA SHEET

## Hampford Research, Inc.

### SECTION 1. -----CHEMICAL PRODUCT AND COMPANY IDENTIFICATION-----

#### BIS HEMA PHOSPHATE

**CHEMICAL FORMULA:** C12 H19 O8 P

**CAS NUMBER:** 32435-46-4

**CHEMICAL NAME:** Bis[2-(methacryloyloxy)ethyl] phosphate

**REVISED:** 4/16/2008

**MANUFACTURER:** Hampford Research, Inc  
P.O. Box 1073  
54 Veterans Blvd.  
Stratford, CT 06615

**EMERGENCY TELEPHONE NUMBERS:** OFFICE (203) 375-1137  
CHEMTREC (800) 424-9300

### SECTION 2. -----COMPOSITION / INFORMATION ON INGREDIENTS-----

COMPONENT	CAS #	% BY WEIGHT	EXPOSURE LIMITS
Bis HEMA Phosphate	32435-46-4	100	Not available

### SECTION 3. -----HAZARDS IDENTIFICATION-----

**EYES:** Irritating to eyes.

**SKIN:** Irritating to skin.

**SWALLOWING:** Do not swallow. If swallowed call physician

**INHALATION:** Irritating to respiratory system.

### SECTION 4. -----FIRST AID MEASURES-----

**EYE CONTACT:**  
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

**SKIN CONTACT:**  
In case of contact, immediately wash with soap and water for at least 15 minutes. Wash contaminated clothing before reuse.

**INGESTION:**  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

**INHALATION:**  
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

### SECTION 5. -----FIRE FIGHTING MEASURES-----

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**  
Avoid exposure to high temperatures, inhibitor depletion, accidental impurities, radiation, and oxidizers. May cause spontaneous polymerization generating heat. Closed containers may rupture during runaway polymerization.

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## FIRE EXTINGUISHING MEDIA:

Water spray/fog for cooling, carbon dioxide or appropriate foam.

## SPECIAL FIREFIGHTING INSTRUCTIONS:

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fight fire from safe distance.

## SECTION 6. -----ACCIDENTAL RELEASE MEASURES-----

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Wear respirator, chemical safety goggles, rubber apron, rubber boots and heavy rubber gloves.

### SPILL CLEANUP MEASURES:

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

## SECTION 7. -----HANDLING AND STORAGE-----

### HANDLING AND STORAGE REQUIREMENTS:

Store in dark, cool area. Never use steam or electrical heating systems such as tapes, mantles, jackets, heat guns or heat lamps to thaw this product. The use of concentrated heat will cause polymerization & possible rupture of the container. Unless inhibited, product can polymerize, possibly rupturing container. Check inhibitor content often. Do not blanket with oxygen free gas. Prevent freezing; inhibitor separates as a solid.

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

**EYE/FACE PROTECTION:** Wear chemical safety goggles. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact from airborne material. Eye bath available.

**SKIN PROTECTION:** Wear appropriate impervious clothing such as compatible chemical-resistant coveralls and gloves. Safety shower available.

**RESPIRATORY PROTECTION:** Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

**ENGINEERING CONTROLS:** Local exhaust required.

## SECTION 9. -----PHYSICAL AND CHEMICAL PROPERTIES-----

**PHYSICAL STATE:** Liquid

**MELTING POINT:** N/A

**BOILING POINT:** 221 C

**SPECIFIC GRAVITY:** 1.25

**APPEARANCE:** Yellowish

**ODOR:** Mild ester odor

**OTHER:** Flash point > 230 C

## SECTION 10. -----STABILITY AND REACTIVITY-----

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**INCOMPATIBILITIES:**

Polymerization may occur.

**HAZARDOUS DECOMPOSITION:**

Toxic fumes of carbon monoxide, carbon dioxide, phosphorous oxides.

**CHEMICAL STABILITY:**

Avoid heat, direct sunlight, strong acids, oxidizing agents.

**HAZARDOUS POLYMERIZATION:**

Polymerization may occur if containers are exposed to prolonged or excessive heat.

**SECTION 11. -----TOXICOLOGICAL INFORMATION-----****TOXICOLOGICAL EFFECTS:****Acute Effects:**

May be harmful by inhalation, ingestion, or skin absorption. Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract. Causes skin irritation. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional information:**

ORL-RAT LD50:>5000 MG/KG

Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

**SECTION 12. -----ECOLOGICAL INFORMATION-----****ECOLOGICAL EFFECTS:**

Data not yet available.

**SECTION 13. -----DISPOSAL INFORMATION-----****WASTE MANAGEMENT PROCEDURES:**

Observe all Federal, State and Local environmental regulations when disposing product.

**SECTION 14. -----TRANSPORT INFORMATION-----****TRANSPORTATION INFORMATION:**

Not considered hazardous for transportation not regulated by DOT or IATA

**-----DOT (DOMESTIC SURFACE)-----**

PROPER SHIPPING NAME:

HAZARD CLASS OR DIVISION:

UN / NA NUMBER:

PACKING GROUP:

DOT PRODUCT RQ lbs (kgs):

HAZARD LABEL (s):

HAZARD PLACARD (s):

**-----IMO / IMDG CODE (OCEAN)-----**

PROPER SHIPPING NAME:

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HAZARD CLASS DIVISION NUMBER:  
UN NUMBER:  
PACKAGING GROUP:  
HAZARD LABEL (s):  
HAZARD PACKARD (s):

-----ICAO / IATA (AIR)-----

PROPER SHIPPING NAME:  
HAZARD CLASS DIVISION NUMBER:  
UN NUMBER:  
SUBSIDIARY RISK:  
PACKING GROUP:  
HAZARD LABEL (s):  
RADIOACTIVE?:  
PASSENGER AIR - MAX QTY:  
PASSENGER PACKING INSTRUCTION:  
CARGO AIR - MAX QTY:  
CARGO AIR PACKAGING INSTRUCTION:

SECTION 15. -----REGULATORY INFORMATION-----

**REGULATORY INFORMATION:**

Regulatory Listings: AICS (Australia); DSL (Canada); EINECS (EEC); ENCS (Japan); ECL (Korea); PICCS (Philippines); TSCA (USA)  
European information EC NO: 251-040-2  
Irritant  
R 36/37/38  
Irritating to eyes, respiratory system and skin.  
S 26  
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S 36  
Wear suitable protective clothing.

SECTION 16. -----ADDITIONAL INFORMATION-----

**ADDITIONAL INFORMATION:**

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Hampford Research, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. Hampford Research grants permission to make unlimited paper copies for internal use only.

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