

## 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Products governed by this SDS: PCPA-##-BMT-###, PCPN-##-BMT-###. Where “##” and “###” are any alphanumeric combination.

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**Emergency Phone Number:**  
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## 2. HAZARD IDENTIFICATION

### GHS Classification

Acute toxicity-Oral (Category 4)  
Skin irritation (Category 2)  
Eye irritation (Category 2B)

### GHS Label elements

Precautionary pictograms:



Signal word: WARNING

Hazard statements:

H302 Harmful if swallowed  
H315 Causes skin irritation.  
H320 Causes eye irritation.

Precautionary statements:

Prevention:

P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face

Response:

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.  
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
P302+P352: IF ON SKIN: Wash with plenty of water. If irritation persists, repeat flushing.  
P330 Rinse Mouth  
P332+P313 If skin irritation occurs: Get medical advice/attention  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse

Storage:

P403+P235 Store in a well ventilated place. Keep cool.

**Disposal:**

P501

Dispose of contents/container in accordance with all national and local regulations.

**3. COMPOSITION/INFORMATION OF INGREDIENTS**

Chemical Name	CAS#	%
Zirconium oxide (in nanocrystal form)	1314-23-4	40-90
Capping agent	Trade Secret	1-20
Benzyl methacrylate	2495-37-6	10-40
Trimethylolpropane triacrylate (TMPTA)	15625-89-5	1-15
Benzophenone	119-61-9	0.1-2

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard found at 29 CFR 1910.1200. Exact concentrations are being withheld due to trade secrets and due to variability of concentrations covering the range of products indicated above.

**4. FIRST AID MEASURES**

**Consult a physician. Show this SDS to the doctor.**

**Eye**

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes, while holding the eyelid(s) open. Obtain medical advice.

**Skin**

Remove contaminated clothing, shoes, and leather goods. Quickly and gently, blot or brush away excess chemical. Wash gently and thoroughly with lukewarm gently flowing water and non-abrasive soap for 15 minutes. If irritation persists, repeat flushing. Obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.

**Inhalation**

Move person to fresh air. Give artificial respiration if needed. If breathing is difficult, qualified personnel should administer oxygen. Get immediate medical attention.

**Ingestion**

Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.

**5. FIRE-FIGHTING MEASURES**
**Extinguishing Media**

Use water fog or spray, universal foam, carbon dioxide or dry chemical. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Special Fire Fighting Procedures**

Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

**Unusual Fire Hazards**

Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

**Hazardous Decomposition Products**

Oxides of carbon

## 6. ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Vapor explosion hazard. Wear appropriate protective clothing to prevent eye and skin contact. Ventilate area. Keep out of sewers. Isolate area and keep unnecessary and unprotected personnel from entering the area. Cover with an inert absorbent material and collect into an appropriate container for disposal. Report spills and releases as required to appropriate authorities.

## 7. HANDLING AND STORAGE

### Handling

Avoid breathing vapors, aerosols and mists. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Keep product away from heat, sparks, flames and all other sources of ignition.

Vapors are heavier than air and may travel long distances and accumulate in low lying areas. Ignition and/or flashback can occur.

Electrically ground and bond all equipment. Use of non-sparking or explosion-proof equipment may be necessary. Empty containers can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

This product is a poor conductor of electricity and can become electrostatically charge, even in bonded or grounded equipment. Operations that can promote accumulation of static charges include but are not limited to mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, container cleaning, sampling, gauging, etc.

If dried, use approved PPE including respiratory protection and ventilation in the presence of solid

### Storage

Store in a cool, dry, well-ventilated location away from incompatible materials. Keep containers closed when not in use. Minimize sources of ignition. Do not store in aluminum, copper, galvanized iron or steel.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Exposure Limits
Zirconium compounds	5 mg/m <sup>3</sup> TWA (OSHA)
Capping agent	None Established
Benzyl methacrylate	None Established
Trimethylolpropane triacrylate (TMPTA)	TWA: 1 mg/m <sup>3</sup> USA. Workplace Environmental Exposure Levels (WEEL)
Benzophenone	TWA: 0.5 mg/m <sup>3</sup> USA. Workplace Environmental Exposure Levels (WEEL)

### Respiratory Protection

If needed, an approved respirator with organic vapor/P100/N100 cartridges may be used. For higher exposures, a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice. Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

### Skin Protection

Impervious gloves are recommended. Preferred materials include butyl rubber, polyethylene, chlorinated polyethylene or ethylvinyl alcohol laminate. Consult with glove supplier.

### Eye Protection

Chemical safety goggles recommended.

### Other Protective Equipment

Impervious clothing is required to prevent skin contact and contamination of personal clothing. If dried, use approved PPE including respiratory protection and ventilation in the presence of solid.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** viscous liquid

<b>pH:</b>	Not applicable	<b>Specific Gravity:</b>	>1.50 g/cm <sup>3</sup>
<b>Boiling Point:</b>	Not available	<b>Melting Point:</b>	Not available
<b>Vapor Pressure:</b>	Not available	<b>Water Solubility:</b>	Not available
<b>Vapor Density:</b>	Not available	<b>Flammable Limits: LEL:</b>	Not available
<b>Flash Point:</b>	>100C	<b>Flammable Limits: UEL:</b>	Not available
<b>Evaporation Rate:</b>	Not available		

## 10. STABILITY AND REACTIVITY

### Incompatible materials

Strong oxidizing agents, strong acids, strong alkalis, reducing agents.

### Conditions to avoid

Keep away from heat, sparks, flames and other sources of ignition.

### Hazardous Decomposition Products

Combustion will produce oxides of carbon and unknown materials.

## 11. TOXICOLOGICAL INFORMATION

### Health Hazards:

Eye: Causes eye irritation.

Skin: Causes skin irritation.

Inhalation: no data available.

Ingestion: May be harmful if swallowed.

Aspiration: no data available.

Repeated/Chronic Exposure: no data available.

Specific target organ toxicity: no data available

### Carcinogenicity:

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**No toxicological data available for product**

## 12. ECOLOGICAL INFORMATION

**No data available for product**

## 13. DISPOSAL INFORMATION

Dispose of by incineration.

Any leftover product is to be disposed of by incineration. Disposal in accordance with all local, state and federal regulations (40CFR260-268). Contaminated packaging is to be triple rinsed with appropriate organic solvent/monomer prior to being disposed of. The contaminated rinse solvent/monomer is to be treated as hazardous waste and must be disposed of by incineration. No other disposal method is acceptable.

**14. TRANSPORT INFORMATION**

DOT Shipping Name: Not dangerous goods  
DOT Hazard Class:  
UN Number:  
Hazardous Substance:  
Reportable Quantity:

IATA Shipping Name: Not dangerous goods.  
IATA Hazard Class:  
UN Number:

**15. REGULATORY INFORMATION**

All components of this product are included on the TSCA Inventory or are not required to be listed.

**16. OTHER INFORMATION**

SDS Date of Preparation: 10/28/2013

## Glossary:

IARC = International Agency for Research of Cancer  
NTP = National Toxicology Program  
OSHA = Occupational Safety and Health Act  
TSCA = Toxic substances Control Act

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