

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Products governed by this SDS:** PCPA-##-ETA, PCPM-##-ETA, PCPN-##-ETA, PCPB-##-ETA, PCPG-##-ETA, PC16-##-ETA, PC18-##-ETA, PCPR-##-ETA, PCPA-###-ETA, PCPM-###-ETA, PCPN-###-ETA, PCPB-###-ETA, PCPG-###-ETA, PC18-###-ETA, PCPR-###-ETA, PC20-###-ETA, PCPG-X-##-ETA, PCPN-X-##-ETA, PCPB-X-##-ETA. Where “##” or “X” are any alphanumeric combination.

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 Chemtrec International: 703-527-3887

## 2. HAZARD IDENTIFICATION

### GHS Classification

Highly Flammable Liquid and Vapor (Category 2)  
 Skin irritation (Category 2)  
 Eye irritation (Category 2A)  
 Specific target organ toxicity - single exposure (Category 3)

### GHS Label elements

Precautionary pictograms:



Signal word: DANGER

Hazard statements:

H225	Highly Flammable Liquid and Vapor
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335 + H336	May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statements:

Prevention:

P210	Keep away from heat/sparks/open flames/hot surfaces – No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment
P241	Use explosion-proof electrical/ventilating/lighting equipment etc...
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.

P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face
<b>Response:</b>	
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378	In case of fire: Use dry sand, foam, carbon dioxide or dry chemical powder extinguisher for extinction.
P302+P352:	IF ON SKIN: Wash with plenty of water. If irritation persists, repeat flushing.
P332+P313:	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse
<b>Storage:</b>	
P403+P235	Store in a well ventilated place. Keep cool.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P405	Store locked up.
<b>Disposal:</b>	
P501	Dispose of contents/container in accordance with all national and local regulations.

### 3. COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Name	CAS#	%
Zirconium dioxide (in nanocrystal form)	1314-23-4	10-90
Ethyl acetate	141-78-6	10-90
Capping Agents	Trade Secret	2-20

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 AND EXPLOSION DATA

### Extinguishing Media

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

### 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

Smoke, fumes containing incomplete combustion products. 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. 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. If dried, use PPE 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.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Exposure Limits
Zirconium compounds	5 mg/m <sup>3</sup> TWA (OSHA)
Ethyl acetate	400 ppm TWA (NIOSH) 400 ppm TWA (OSHA) 400 ppm TWA (ACGIH)
Capping agents	None Established

### 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.

### 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 PPE in the presence of solid

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Properties shown are for Ethyl Acetate

**Appearance:** Liquid

<b>pH:</b>	Not applicable	<b>Specific Gravity:</b>	0.902 g/cm <sup>3</sup>
<b>Boiling Point:</b>	75-78 °C	<b>Melting Point:</b>	-83.5 °C
<b>Vapor Pressure:</b>	103 mbar @ 20 °C	<b>Water Solubility:</b>	Slightly soluble
<b>Vapor Density:</b>	3.04 (Air =1.0)	<b>Flammable Limits: LEL:</b>	2.0%
<b>Flash Point:</b>	-4 °C	<b>Flammable Limits: UEL:</b>	11.5%
<b>Evaporation Rate:</b>	Not available		

**10. STABILITY AND REACTIVITY**
**Incompatibility/Conditions to Avoid**

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

**Hazardous Decomposition Products**

Combustion will produce oxides of carbon.

**11. TOXICOLOGICAL INFORMATION**
**Health Hazards:**

Eyes: Causes eye irritation. High vapor/aerosol concentrations may be irritating.

Skin: Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping.

Inhalation: May cause irritation to the mucous membranes and upper respiratory tract. In high concentrations, vapors and aerosol mists have a narcotic effect and may cause headache, fatigue, dizziness and nausea.

Ingestion: Irritating. May cause nausea, stomach pain and vomiting. Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis.

Target organs: Eyes. Skin. Respiratory system. Central nervous system. Liver. Kidneys.

Chronic effects: organic solvents may be absorbed into the body by inhalation and cause permanent damage to the nervous system, including the brain. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May cause eyes, skin, and respiratory irritation.

**No toxicological data available for product**

**Ethyl Acetate Toxicity Data**

Dermal: LD50 (rabbit) – 18,000 mg/kg

Oral: LD50 (rat) – 5,620 mg/kg

**12. ECOLOGICAL INFORMATION**

**No ecological toxicity data available for product**

**Ethyl Acetate Ecological Toxicity Data**

LC50 (gold orfe) 270 mg/L, 48.0 hr

EC50 (water flea) 717 mg/L, 48 hr

### 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:** ETHYL ACETATE Mixture  
**DOT Hazard Class:** 3, PG II  
**UN Number:** UN1173

**IATA Shipping Name:** ETHYL ACETATE Mixture  
**IATA Hazard Class:** 3, PG II  
**UN Number:** UN1173

### 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:** 03/22/2015

#### Emergency Overview

Extremely flammable liquid and vapor - vapor may cause flash fire. Will be easily ignited by heat, spark or flames. Causes eye irritation. Harmful if swallowed - may enter lungs if swallowed or vomited. Prolonged or repeated skin contact may cause drying, cracking, or irritation. High vapor concentrations may cause drowsiness and irritation of the eyes or respiratory tract.

#### 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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