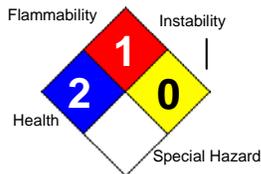


## 464 Ultra High Solids Urethane Topcoat Part-A



|              |   |
|--------------|---|
| HEALTH       | 2 |
| FLAMMABILITY | 1 |
| PHYSICAL     | 0 |
| PPE          | X |



Printed: 10/26/2015  
Revision: 10/26/2015

## 1. Product and Company Identification

**Product Code:** 464-A  
**Product Name:** 464 Ultra High Solids Urethane Topcoat Part-A  
**Trade Name:** 464 Ultra High Solids Urethane Topcoat Part-A

### Manufacturer Information

**Company Name:** Epoxy Systems, Inc.  
 20774 W Pennsylvania Ave  
 Dunnellon, FL 34431

**Phone Number:** +1 (352) 489-1666

**Emergency Contact:** PERS (USA) (800) 633-8253

**Alternate Emergency Contact:** PERS (International) +1 (801) 629-0667

## 2. Hazards Identification

| GHS Classification                            | Placard           | Key word | GHS hazard phrase             |
|---|-------------------|----------|-------------------------------|
| Skin Corrosion/Irritation, Category 3         | none              | Warning  | Causes mild skin irritation   |
| Serious Eye Damage/Eye Irritation, Category 2 | Exclamation point | Warning  | Causes serious eye irritation |

### GHS Hazard Phrases

H316 - Causes mild skin irritation.  
 H319 - Causes serious eye irritation.  
 H335 - May cause respiratory irritation.  
 H303 - May be harmful if swallowed.

### GHS Precaution Phrases

P281 - Use personal protective equipment as required.  
 P262 - Do not get in eyes, on skin, or on clothing.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P273 - Avoid release to the environment.

### GHS Response Phrases

P302 - IF ON SKIN: P362 - Take off contaminated clothing. P351 - Rinse cautiously with water for several minutes. P332+313 - If skin irritation occurs, get medical advice/attention.  
 P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313 - If eye irritation persists, get medical advice/attention.  
 P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P314 - Get medical attention/advice if you feel unwell.  
 P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P311 - Call a POISON CENTER or doctor/physician.

### GHS Storage and Disposal Phrases

P404 - Store in a closed container.

### Potential Health Effects (Acute and Chronic)

May cause irritating effects.

### Inhalation

May cause respiratory irritation.

**Skin Contact**

May cause skin irritation.

**Eye Contact**

Causes eye irritation.

**Ingestion**

May be harmful if swallowed.

**Medical Conditions Generally Aggravated By Exposure**

Skin disorders, Respiratory disorders, Eye disorders, Skin Allergies.

**OSHA Regulatory Status:**

This material is classified as hazardous under OSHA regulations.

**3. Composition/Information on Ingredients**

| Hazardous Components (Chemical Name)   | CAS #       | Concentration |
|--|-------------|---------------|
| 1. Fatty acids, C16-18 and C18-unsatd, epoxidized., Me esters, polymers with trimethylolpropan         | 189021-46-3 | 45 - 60 %     |
| 2. Titanium dioxide  | 13463-67-7  | 20 - 35 %     |
| 3. 1,5-Pentanediol, 2,4-diethyl-   | 57987-55-0  | 1.0 - 10 %    |
| 4. Zeolites other than erionite (clinoptilolite, phillipsite, mordenite, non-fibrous Japanese zeolite, | 1318-02-1   | 1.0 - 10 %    |
| 5. Silica, amorphous treated   | 112945-52-5 | 1.0 - 5.0 %   |
| 6. Ethyl Benzene   | 100-41-4    | <0.14 %       |

**4. First Aid Measures**

**Emergency and First Aid Procedures**

Use first aid treatment according to the nature of the injury.

**In Case of Inhalation**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If experiencing respiratory symptoms: Get medical attention immediately.

**In Case of Skin Contact**

In case of contact, immediately wash skin with soap and copious amounts of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists.

**In Case of Eye Contact**

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**In Case of Ingestion**

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately. For further assistance, contact your local Poison Control Center.

**Signs and Symptoms Of Exposure**

May cause rash on skin, and redness in eyes. May cause coughing by inhalation of a mist or spray.

**5. Fire Fighting Measures**

**Flash Pt:** > 200.00 F Method Used: Not Applicable

**Explosive Limits:** LEL: NE UEL: NE

**Autoignition Pt:** No data available.

**Fire Fighting Instructions**

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Use water spray to cool unopened containers.

**Flammable Properties and Hazards**

Product is not considered a fire hazard. Closed containers may rupture (due to build up in pressure) when exposed to extreme heat.

**Hazardous Combustion Products**

In a fire, product may produce the following: Carbon monoxide, Carbon dioxide.

**Suitable Extinguishing Media**

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

**Unsuitable Extinguishing Media**

No data available.

**6. Accidental Release Measures**

**Steps To Be Taken In Case Material Is Released Or Spilled**

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL.

Evacuate area. Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate the area.

**Protective Precautions, Protective Equipment and Emergency Procedures**

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

**Environmental Precautions**

Prevent entry into waterways, sewers, basements or confined areas.

**7. Handling and Storage**

**Hazard Label Information:**

Avoid contact with skin and eyes. Do not get on skin and clothing. Store in a cool, dry place.

**Precautions To Be Taken in Handling**

Provide adequate ventilation. Do not breathe vapor. Do not get in eyes, on skin or on clothing.

**Precautions To Be Taken in Storing**

Keep container tightly closed in a dry and well-ventilated place.

**Other Precautions**

Wash thoroughly after handling.

**8. Exposure Controls/Personal Protection**

| Hazardous Components (Chemical Name)   | CAS #       | OSHA PEL             | ACGIH TWA                     | Other Limits |
|--|-------------|----------------------|-------------------------------|--------------|
| 1. Fatty acids, C16-18 and C18-unsatd, epoxidized., Me esters, polymers with trimethylolpropan         | 189021-46-3 | No data.             | No data.                      | No data.     |
| 2. Titanium dioxide  | 13463-67-7  | PEL: 15 (dust) mg/m3 | TLV: 10 mg/m3                 | No data.     |
| 3. 1,5-Pentanediol, 2,4-diethyl-   | 57987-55-0  | No data.             | No data.                      | No data.     |
| 4. Zeolites other than erionite (clinoptilolite, phillipsite, mordenite, non-fibrous Japanese zeolite, | 1318-02-1   | No data.             | No data.                      | No data.     |
| 5. Silica, amorphous treated   | 112945-52-5 | No data.             | No data.                      | No data.     |
| 6. Ethyl Benzene   | 100-41-4    | PEL: 100 ppm         | TLV: 100 ppm<br>STEL: 125 ppm | No data.     |

**Protective Equipment Summary - Hazard Label Information:**

Neoprene gloves Safety glasses, or goggles. Impervious clothing.

**Respiratory Equipment (Specify Type)**

Normally when good engineering controls are used, no respiratory protection is needed. However, if cured product is abraded by sanding or grinding use a NIOSH approved air-purifying respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air

purifying respirators may not provide adequate protection.

**Eye Protection**

Safety glasses, or goggles.

**Protective Gloves**

Nitrile rubber and Neoprene are recommended.

**Other Protective Clothing**

Where splashing is possible, full chemically resistant protective clothing, safety glasses or face shield and boots are required.

**Engineering Controls (Ventilation etc.)**

Good general ventilation should be sufficient to control airborne levels. Safety shower and eye bath.

**Work/Hygienic/Maintenance Practices**

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

**Environmental Exposure Controls**

Avoid release to the environment. Avoid runoff into storm sewers and ditches which lead to waterways.

**9. Physical and Chemical Properties**

|   |                              |  |                                |
|---|------------------------------|--|--------------------------------|
| <b>Physical States:</b>                   | <input type="checkbox"/> Gas | <input checked="" type="checkbox"/> Liquid | <input type="checkbox"/> Solid |
| <b>Melting Point:</b>                     | No data.                     |  |                                |
| <b>Boiling Point:</b>                     | > 300.00 F                   |  |                                |
| <b>Autoignition Pt:</b>                   | No data.                     |  |                                |
| <b>Flash Pt:</b>                          | > 200.00 F                   | Method Used:                               | Not Applicable                 |
| <b>Explosive Limits:</b>                  | LEL: NE                      | UEL:                                       | NE                             |
| <b>Specific Gravity (Water = 1):</b>      | ~ 1.41                       |  |                                |
| <b>Density:</b>                           | ~ 11.75                      |  |                                |
| <b>Vapor Pressure (vs. Air or mm Hg):</b> | NE                           |  |                                |
| <b>Vapor Density (vs. Air = 1):</b>       | NE                           |  |                                |
| <b>Evaporation Rate:</b>                  | NE                           |  |                                |
| <b>Solubility in Water:</b>               | No data.                     |  |                                |
| <b>Solubility Notes</b>                   | Insoluble.                   |  |                                |
| <b>Percent Volatile:</b>                  | N.A.                         |  |                                |
| <b>HAP / Volume:</b>                      | NE                           |  |                                |
| <b>Saturated Vapor Concentration:</b>     | NE                           |  |                                |

**Appearance and Odor**

No apparent odor. Various Colors.

**10. Stability and Reactivity**

**Stability:** Unstable  Stable

**Reactivity**

Stable under normal conditions.

**Conditions To Avoid - Instability**

Avoid uncontrolled contact with isocyanates.

**Incompatibility - Materials To Avoid**

Avoid: acids, alkalis, oxidizing agents.

**Hazardous Decomposition Or Byproducts**

Thermal decomposition may produce smoke, carbon monoxide, carbon dioxide.

**Possibility of Hazardous Polymerization:** Will occur [ ] Will not occur [ X ]

**Conditions To Avoid - Hazardous Reactions**

None known.

**11. Toxicological Information**

**Toxicological Information**

Product not considered to be a toxic mixture.

**Chronic Toxicological Effects**

No data available.

**Irritation or Corrosion**

May cause skin irritation. May be moderately irritating to eyes.

**Symptoms related to Toxicological Characteristics**

No data available.

| Hazardous Components (Chemical Name)   | CAS #       | NTP  | IARC | ACGIH | OSHA |
|--|-------------|------|------|-------|------|
| 1. Fatty acids, C16-18 and C18-unsatd, epoxidized., Me esters, polymers with trimethylolpropan         | 189021-46-3 | n.a. | n.a. | n.a.  | n.a. |
| 2. Titanium dioxide  | 13463-67-7  | n.a. | 2B   | A4    | n.a. |
| 3. 1,5-Pentanediol, 2,4-diethyl-   | 57987-55-0  | n.a. | n.a. | n.a.  | n.a. |
| 4. Zeolites other than erionite (clinoptilolite, phillipsite, mordenite, non-fibrous Japanese zeolite, | 1318-02-1   | n.a. | 3    | n.a.  | n.a. |
| 5. Silica, amorphous treated   | 112945-52-5 | n.a. | n.a. | n.a.  | n.a. |
| 6. Ethyl Benzene   | 100-41-4    | n.a. | 2B   | A3    | n.a. |

**12. Ecological Information**

**General Ecological Information**

Avoid release to the environment. May be hazardous to the environment if released in large quantities.

**Results of PBT and vPvB assessment**

No data available.

**Persistence and Degradability**

No data available.

**Bioaccumulative Potential**

not reported, unknown.

**Mobility in Soil**

not reported, unknown.

**13. Disposal Considerations**

**Waste Disposal Method**

Dispose of this product, product solutions and its container according to federal, state and local authority requirements. Avoid release to the environment.

**14. Transport Information**

**LAND TRANSPORT (US DOT)**

**DOT Proper Shipping Name**

Not Regulated.

**Precautionary Label**

May cause skin, eye, and respiratory irritation.  
 Always read Safety Material Data Sheet before use.  
 Not classified as a dangerous good under transport regulations.

**AIR TRANSPORT (ICAO/IATA)**

**ICAO/IATA Shipping Name** Non-hazardous for air transport.

**MARINE TRANSPORT (IMDG/IMO)**

**IMDG/IMO Shipping Name** Not Regulated.

**15. Regulatory Information**

**US EPA SARA Title III**

| Hazardous Components (Chemical Name)   | CAS #       | Sec.302 (EHS) | Sec.304 RQ  | Sec.313 (TRI) | Sec.110 |
|--|-------------|---------------|-------------|---------------|---------|
| 1. Fatty acids, C16-18 and C18-unsatd, epoxidized., Me esters, polymers with trimethylolpropan         | 189021-46-3 | No            | No          | No            | No      |
| 2. Titanium dioxide  | 13463-67-7  | No            | No          | No            | No      |
| 3. 1,5-Pentanediol, 2,4-diethyl-   | 57987-55-0  | No            | No          | No            | No      |
| 4. Zeolites other than erionite (clinoptilolite, phillipsite, mordenite, non-fibrous Japanese zeolite, | 1318-02-1   | No            | No          | No            | No      |
| 5. Silica, amorphous treated   | 112945-52-5 | No            | No          | No            | No      |
| 6. Ethyl Benzene   | 100-41-4    | No            | Yes 1000 LB | Yes           | Yes     |

**Regulatory Information**

SARA Section 311/312: Acute Health Hazard.

**16. Other Information**

CA=CIRCA NA=NOT AVAILABLE NE=NOT ESTABLISHED NR=NOT REGULATED NP= NOT APPLICABLE PR=PROPRIETARY TS=TRADE SECRET ?=UNKNOWN.

**Company Policy or Disclaimer**

The information contained in this MSDS is taken from sources believed to be accurate as of the date hereof; however Epoxy Systems, Inc. makes no expressed or implied warranty in respect to the accuracy of the information or the suitability of the recommendations, and assumes no liabilities to any user thereof.

**Revision Date:** 10/26/2015