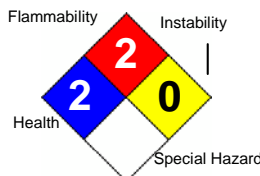


## Epoxy.com Product #461 High Solids Urethane Topcoat Hardener- Part B



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



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## 1. Product and Company Identification

**Product Code:** 461-B

**Product Name:** 461 High Solids Urethane Topcoat Hardener- Part B

**Trade Name:** 461 High Solids Urethane Topcoat Hardener- Part B

**Manufacturer Information**

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

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

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

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

**Intended Use:** Industrial Maintenance Coatings

## 2. Hazards Identification

| GHS Classification                                           | Placard           | Key word | GHS hazard phrase                                                       |
|--------------------------------------------------------------|-------------------|----------|-------------------------------------------------------------------------|
| Flammable Liquids, Category 4                                | none              | Warning  | Combustible liquid                                                      |
| Skin Corrosion/Irritation, Category 2                        | Exclamation point | Warning  | Causes skin irritation                                                  |
| Serious Eye Damage/Eye Irritation, Category 2A               | Exclamation point | Warning  | Causes serious eye irritation                                           |
| Target Organ Systemic Toxicity (single exposure), Category 3 | Exclamation point | Warning  | May cause respiratory irritation, or may cause drowsiness and dizziness |

### GHS Hazard Phrases

H227 - Combustible liquid.  
H315 - Causes 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.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P264 - Wash hands thoroughly after handling.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P362+364 - Take off contaminated clothing and wash it before reuse.  
P271 - Use only outdoors or in a well-ventilated area.

### GHS Response Phrases

P370+378 - In case of fire, use CO<sub>2</sub>, Dry Chemical, Water Spray, Foam to extinguish.  
P302+352 - IF ON SKIN: Wash with plenty of soap and water. P333+313 - If skin irritation or rash occurs, seek medical advice/attention. P362 - Take off contaminated clothing.  
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

P403+235 - Store in cool/well-ventilated place.

P501 - Dispose of contents/container to local, state, and federal authority requirements.

P405 - Store locked up.

#### Potential Health Effects (Acute and Chronic)

Causes eye irritation. May cause skin irritation. May cause respiratory tract irritation.

#### 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. (+-)-Propylene carbonate, Anhydrous                 | 108-32-7   | 60 - 75 %     |
| 2. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate | 88917-22-0 | 10 - 20 %     |
| 3. Zinc Compound (proprietary)                         | NA         | <2.0 %        |
| 4. Butyl acetate                                       | 123-86-4   | <2.0 %        |
| 5. Diisobutyl ketone                                   | 108-83-8   | <1.5 %        |

### 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:** > 160.00 F Method Used: Closed Cup

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

**Autoignition Pt:** > 500.00 F

### 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

Combustible material: may burn but does not ignite readily.

### 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

Do not use a direct water stream, which may spread fire.

## 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.

Use personal protective equipment. 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. Avoid inhalation of vapor or mist.

Store in cool/well-ventilated 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. Keep away from sources of ignition.

## 8. Exposure Controls/Personal Protection

| Hazardous Components (Chemical Name)                   | CAS #      | OSHA PEL     | ACGIH TWA                     | Other Limits |
|--------------------------------------------------------|------------|--------------|-------------------------------|--------------|
| 1. (+-)-Propylene carbonate, Anhydrous                 | 108-32-7   | No data.     | No data.                      | No data.     |
| 2. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate | 88917-22-0 | No data.     | No data.                      | No data.     |
| 3. Zinc Compound (proprietary)                         | NA         | No data.     | No data.                      | No data.     |
| 4. Butyl acetate                                       | 123-86-4   | PEL: 150 ppm | TLV: 150 ppm<br>STEL: 200 ppm | No data.     |
| 5. Diisobutyl ketone                                   | 108-83-8   | PEL: 50 ppm  | TLV: 25 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

**Physical States:**  Gas  Liquid  Solid

**Melting Point:** No data.

**Explosive Properties**

Closed container may rupture (due to build up in pressure) when exposed to extreme heat.

**Boiling Point:** > 400.00 F

**Autoignition Pt:** > 500.00 F

**Flash Pt:** > 160.00 F Method Used: Closed Cup

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

**Specific Gravity (Water = 1):** ~ 1.16

**Density:** ~ 9.69

**Vapor Pressure (vs. Air or mm Hg):** NE

**Vapor Density (vs. Air = 1):** NE

**Evaporation Rate:** NE

**Solubility in Water:** NE

**Percent Volatile:** >= 90.0 % by weight.

**HAP / Volume:** ~ 0.5000 LB/GL

**Saturated Vapor Concentration:** NE

**Appearance and Odor**

Clear to light yellow. sweetish odor.

## 10. Stability and Reactivity

**Stability:** Unstable [ ] Stable [ X ]

### Reactivity

Stable under normal conditions.

### Conditions To Avoid - Instability

Avoid: Heat, flames and sparks.

### Incompatibility - Materials To Avoid

Avoid strong acids, bases, and oxidizing agents.

### Hazardous Decomposition Or Byproducts

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

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

### Polymerization:

### Conditions To Avoid - Hazardous Reactions

None known.

## 11. Toxicological Information

### Chronic Toxicological Effects

No data available.

### Irritation or Corrosion

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

### Symptoms related to Toxicological Characteristics

Prolonged or repeated contact may cause skin irritation with local redness.

| Hazardous Components (Chemical Name)                   | CAS #      | NTP  | IARC | ACGIH | OSHA |
|--------------------------------------------------------|------------|------|------|-------|------|
| 1. (+)-Propylene carbonate, Anhydrous                  | 108-32-7   | n.a. | n.a. | n.a.  | n.a. |
| 2. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate | 88917-22-0 | n.a. | n.a. | n.a.  | n.a. |
| 3. Zinc Compound (proprietary)                         | NA         | n.a. | n.a. | n.a.  | n.a. |
| 4. Butyl acetate                                       | 123-86-4   | n.a. | n.a. | n.a.  | n.a. |
| 5. Diisobutyl ketone                                   | 108-83-8   | n.a. | n.a. | n.a.  | 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

Not determined for mixture.

### 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** (Non-Bulk) Not Regulated.

Note: The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. Shipment compliance is the responsibility of the person offering the product for transport.

**Precautionary Label** May cause skin, eye, and respiratory irritation.  
Always read Safety Material Data Sheet before use.

### AIR TRANSPORT (ICAO/IATA)

**ICAO/IATA Shipping Name** (Non-Bulk) Not Regulated.

### MARINE TRANSPORT (IMDG/IMO)

**IMDG/IMO Shipping Name** (Non-Bulk) 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. (+-)-Propylene carbonate, Anhydrous                 | 108-32-7   | No            | No          | No            | No      |
| 2. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate | 88917-22-0 | No            | No          | No            | No      |
| 3. Zinc Compound (proprietary)                         | NA         | No            | No          | No            | No      |
| 4. Butyl acetate                                       | 123-86-4   | No            | Yes 5000 LB | No            | No      |
| 5. Diisobutyl ketone                                   | 108-83-8   | No            | No          | No            | No      |

### Regulatory Information

SARA Section 311/312: Acute Health Hazard. Fire Hazard.

SARA 313 Toxic Chemicals: Zinc Compound (CAS# Trade Secret)

## 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.

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