1. Product and Company Identification

Product Code: 461-SATIN-B
Product Name: 461-SATIN High Solids Urethane Topcoat - Satin Part B
Trade Name: 461-SATIN High Solids Urethane Topcoat - Satin 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
- Flammable Liquids, Category 4
- Skin Corrosion/Irritation, Category 2
- Serious Eye Damage/Eye Irritation, Category 2A
- Target Organ Systemic Toxicity (single exposure), Category 3

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 before reuse.
- P271 - Use only outdoors or in a well-ventilated area.

GHS Response Phrases
- P370+378 - In case of fire, use CO2, 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)**

**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

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Propanol, 1(or 2)-(2-methoxymethylene) - acetate</td>
<td>88917-22-0</td>
<td>75 - 95 %</td>
</tr>
<tr>
<td>2. Xylene</td>
<td>1330-20-7</td>
<td>&lt;4.0 %</td>
</tr>
<tr>
<td>3. Butyl acetate</td>
<td>123-86-4</td>
<td>&lt;2.5 %</td>
</tr>
<tr>
<td>4. Dibutyltin dilaurate</td>
<td>77-58-7</td>
<td>1.0 - 2.0 %</td>
</tr>
<tr>
<td>5. Zinc Compound</td>
<td>NA</td>
<td>&lt;1.5 %</td>
</tr>
<tr>
<td>6. Ethyl Benzene</td>
<td>100-41-4</td>
<td>&lt;1.5 %</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TWA</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate</td>
<td>88917-22-0</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. Xylene</td>
<td>1330-20-7</td>
<td>PEL: 100 ppm</td>
<td>TLV: 100 ppm</td>
<td>No data.</td>
</tr>
<tr>
<td>5. Zinc Compound</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>6. Ethyl Benzene</td>
<td>100-41-4</td>
<td>PEL: 100 ppm</td>
<td>TLV: 100 ppm</td>
<td>No data.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Physical States:</th>
<th>[ ] Gas</th>
<th>[X] Liquid</th>
<th>[ ] Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point:</td>
<td>No data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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):
~ .971 - .995

Density:       ~ 8.1 - 8.3

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

Vapor Density (vs. Air = 1): NE

Evaporation Rate: NE

Solubility in Water: NE

Percent Volatile: ~ 95 % by volume.

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 Polymerization:
Will occur [ ] Will not occur [ X ]

Conditions To Avoid - Hazardous Reactions
None known.

11. Toxicological Information

Toxicological Information
CAS# 1330-20-7:
Acute toxicity, LD50, Oral, Rat, 4300. MG/KG.
Results:
Liver: Other changes.
Kidney, Ureter, Bladder: Other changes.
- AMA Archives of Industrial Health., For publisher information, see AEHLAU, Chicago, IL, Vol/p/yr: 14,387, 1956

Acute toxicity, LC50, Inhalation, Rat, 5000. PPM, 4 H.
Results:
Behavioral: Convulsions or effect on seizure threshold.
Behavioral: Ataxia.
Lungs, Thorax, or Respiration: Dyspnea.

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.

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate</td>
<td>88917-22-0</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>2. Xylene</td>
<td>1330-20-7</td>
<td>n.a.</td>
<td>3</td>
<td>A4</td>
<td>n.a.</td>
</tr>
<tr>
<td>3. Butyl acetate</td>
<td>123-86-4</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>5. Zinc Compound</td>
<td>NA</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>6. Ethyl Benzene</td>
<td>100-41-4</td>
<td>n.a.</td>
<td>2B</td>
<td>A3</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
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. Propanol, 1(or 2)-(2-methoxymethylethoxy)-, acetate | 88917-22-0 | No | No | No | No
2. Xylene | 1330-20-7 | No | Yes 100 LB | Yes | Yes
3. Butyl acetate | 123-86-4 | No | Yes 5000 LB | No | No
4. Dibutyltin dilaurate | 77-58-7 | No | No | No | No
5. Zinc Compound | NA | 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. Fire Hazard.

SARA 313 Toxic Chemicals: Ethylbenzene CAS# 100-41-4 < 1.5%, Xylene CAS# 1330-20-7 < 4%
Zinc Compound (CAS# Trade Secret)

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Ethylbenzene CAS#100-41-4

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: 11/03/2015