

402 Urethane Topcoat Hardener - Part B



HEALTH	2
FLAMMABILITY	3
PHYSICAL	0
PPE	X

Flammability	3	Instability	0
Health	2	Special Hazard	

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1. Product and Company Identification

Product Code: 402-B

Product Name: 402 Urethane Topcoat Hardener - Part B

Trade Name: 402 Urethane Topcoat Hardener - Part B

Distributor Information

Company Name: Epoxy Systems, Inc.
20774 W Pennsylvania Ave.
Dunnellon, Florida 34421

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 3	Flame	Warning	Flammable liquid and vapor
Acute Toxicity: Inhalation, Category 4	Exclamation point	Warning	Harmful if inhaled
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Skin Sensitization, Category 1	Exclamation point	Warning	May cause an allergic skin reaction
Target Organ Systemic Toxicity (single exposure), Category 3	Exclamation point	Warning	May cause respiratory irritation, or may cause drowsiness and dizziness

GHS Hazard Phrases

H226 - Flammable liquid and vapor.

H332 - Harmful if inhaled.

H319 - Causes serious eye irritation.

H315 - Causes skin irritation.

H313+333 - May be harmful in contact with skin or if inhaled.

H335 - May cause respiratory irritation. EUH204 - Contains isocyanates. May produce an allergic reaction.

GHS Precaution Phrases

P281 - Use personal protective equipment as required.

P233 - Keep container tightly closed.

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical/ventilating/lighting/.../ equipment.

P243 - Take precautionary measures against static discharge.

P242 - Use only non-sparking tools.

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P285 - In case of inadequate ventilation wear respiratory protection.

P264 - Wash hands thoroughly after handling.

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GHS Response Phrases

P370+378 - In case of fire, use Carbon Dioxide, Dry Chemical, Foam, Water spray for large fires to extinguish.

P370 - In case of fire: P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

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.

P302+352 - IF ON SKIN: Wash with plenty of soap and water. P333+313 - If skin irritation or rash occurs, seek medical advice/attention.

P363 - Wash contaminated clothing before reuse.

P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P311 - Call a POISON CENTER or doctor/physician.

GHS Storage and Disposal Phrases

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

P402+404 - Store in a dry place and/or in closed container.

P403 - Store in well-ventilated place.

P405 - Store locked up.

Potential Health Effects (Acute and Chronic)

May cause skin, eye, and respiratory irritation. May cause skin sensitization. May cause respiratory sensitization.

Inhalation

May cause respiratory irritation. May cause allergic respiratory reaction.

Skin Contact

May cause skin irritation. May cause allergic skin reaction.

Eye Contact

Substance causes moderate eye irritation.

Ingestion

May be harmful if swallowed.

Recommended Exposure Limits

Not established.

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. Poly(hexamethylene diisocyanate)	28182-81-2	60 - 90 %
2. Butyl acetate	123-86-4	5.0 - 20 %
3. Xylene	1330-20-7	5.0 - 15 %
4. Ethyl Benzene	100-41-4	1.0 - 5.0 %

4. First Aid Measures

Emergency and First Aid Procedures

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. 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.

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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

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Signs and Symptoms Of Exposure

May cause allergic skin reaction. May cause rash on skin, and redness in eyes. May cause coughing by inhalation of a mist or spray. If material is heated, sprayed, vapors from this material can produce asthmatic sensitization to the respiratory system.

5. Fire Fighting Measures

Flash Pt: ~ 91.00 F Method Used: Closed Cup

Explosive Limits: LEL: NE UEL: NE

Autoignition Pt: 752.00 F

Fire Fighting Instructions

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Flammable Properties and Hazards

Closed container 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, Oxides of nitrogen, Traces of hydrogen cyanide, Isocyanate vapors

Suitable Extinguishing Media

Dry chemical or CO2. Foam.

Unsuitable Extinguishing Media

Reacts with water, with formation of carbon dioxide.

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.

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. Where splashing is possible, full chemically resistant protective clothing, and boots are required.

Environmental Precautions

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

7. Handling and Storage

Hazard Label Information:

Keep away from heat and flame. Keep under a nitrogen blanket. Avoid inhalation of vapor or mist. Store in airtight containers

Precautions To Be Taken in Handling

Wear all personal protection required. Wash thoroughly after handling. Provide adequate ventilation. Do not breathe vapor. Do not get in eyes, on skin or on clothing.

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Precautions To Be Taken in Storing

Protect from moisture. Purge container with nitrogen before resealing. Keep dry. Store in cool/well-ventilated place. Store away from incompatible material.

Other Precautions

Keep away from sources of ignition - No smoking. Keep away from heat, sparks, and flame.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Poly(hexamethylene diisocyanate)	28182-81-2	No data.	No data.	No data.
2. Butyl acetate	123-86-4	PEL: 150 ppm	TLV: 150 ppm STEL: 200 ppm	No data.
3. Xylene	1330-20-7	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.
4. Ethyl Benzene	100-41-4	PEL: 100 ppm	TLV: 100 ppm STEL: 125 ppm	No data.

Protective Equipment Summary - Hazard Label Information:

Chemical resistant gloves Safety glasses, or goggles. Impervious clothing. Chemical resistant boots

Respiratory Equipment (Specify Type)

Respiratory protection in case of vapor/aerosol release. Combination filter for gases/vapors of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2). In isocyanate-containing environments (air-purifying or fresh air-supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures.

Eye Protection

Safety glasses, or goggles.

Protective Gloves

Nitrile rubber and Neoprene are recommended. Check during use that the gloves are still retaining their protective properties.

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 runoff into storm sewers and ditches which lead to waterways. May be hazardous to the environment if released in large quantities.

9. Physical and Chemical Properties

Physical States:	[] Gas [X] Liquid [] Solid
Melting Point:	NE
Boiling Point:	257.00 F - 260.00 F
Decomposition Temperature:	NE
Autoignition Pt:	752.00 F
Flash Pt:	~ 91.00 F Method Used: Closed Cup
Explosive Limits:	LEL: NE UEL: NE
Specific Gravity (Water = 1):	~ 1.059

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Density: ~ 8.84 LB/GL
Vapor Pressure (vs. Air or mm Hg): NE
Vapor Density (vs. Air = 1): NE
Evaporation Rate: NE
Solubility in Water: NP

Solubility Notes

Insoluble - Reacts slowly with water to liberate CO₂ gas.

Percent Volatile: NP 25.0 % by weight.
VOC / Volume: NP
HAP / Volume: NP
Saturated Vapor Concentration: NE

Appearance and Odor

Odor: Solvent odor.

Appearance: Clear to light yellow.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability

Extreme temperatures. Moisture.

Incompatibility - Materials To Avoid

Reacts with alcohols, amines. Copper alloys. Reacts with water, with formation of carbon dioxide.

Hazardous Decomposition Or Byproducts

Carbon monoxide, Oxides of nitrogen, Traces of hydrogen cyanide, Isocyanate vapors

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

Conditions To Avoid - Hazardous Reactions

Will not undergo hazardous polymerization in normal storage conditions.

11. Toxicological Information**Toxicological Information**

May cause sensitization by inhalation. May cause sensitization by skin contact.

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.

- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,123, 1974

Chronic Toxicological Effects

Respiratory or skin sensitization.

Irritation or Corrosion

May cause slight skin irritation or skin sensitization. May be slightly irritating to eyes and respiratory system.

Symptoms related to Toxicological Characteristics

May cause respiratory sensitization. May cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Poly(hexamethylene diisocyanate)	28182-81-2	n.a.	n.a.	n.a.	n.a.
2. Butyl acetate	123-86-4	n.a.	n.a.	n.a.	n.a.
3. Xylene	1330-20-7	n.a.	3	A4	n.a.
4. Ethyl Benzene	100-41-4	n.a.	2B	A3	n.a.

12. Ecological Information

General Ecological Information

Avoid release to the environment.

Results of PBT and vPvB assessment

No data available.

Persistence and Degradability

Not readily biodegradable.

Bioaccumulative Potential

No data available.

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. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name	Resin solution, [flammable] (contains Xylene, N-Butyl Acetate)
DOT Hazard Class:	3
DOT Hazard Label:	FLAMMABLE LIQUID
UN/NA Number:	UN1866
Packing Group:	III
Precautionary Label	Warning! Flammable Liquid. Ventilation is normally required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Ground and bond containers and equipment before transferring to avoid static sparks. Always read Safety Material Data Sheet before use.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name	Resin solution, [flammable] (contains Xylene, N-Butyl Acetate)
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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

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mode of transport. Shipment compliance is the responsibility of the person offering the product for transport.

UN Number: 1866
Hazard Class: 3 - FLAMMABLE LIQUID
Packing Group: III

MARINE TRANSPORT (IMDG/IMO)

IMDG/IMO Shipping Name Resin solution, [flammable] (contains Xylene, N-Butyl Acetate)
UN Number: 1866
Hazard Class: 3 - FLAMMABLE LIQUID
Packing Group: III
Marine Pollutant: No

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. Poly(hexamethylene diisocyanate)	28182-81-2	No	No	No	No
2. Butyl acetate	123-86-4	No	Yes 5000 LB	No	No
3. Xylene	1330-20-7	No	Yes 100 LB	Yes	Yes
4. Ethyl Benzene	100-41-4	No	Yes 1000 LB	Yes	Yes

Regulatory Information

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

California Prop. 65:

This product contains the following Proposition 65 chemicals: Ethylbenzene 1.5% 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.

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