

**TROWELABLE FLOOR RESURFACER PRIMER HARDENER**

Last revised: 09/10/00

Printed: 09/26/00

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Chemical family Epoxy Curing Agent Solution

General information: This information applies to the hardener component of the two-part kit. After curing, the product is not hazardous.

**MANUFACTURER**

ITW Philadelphia Resins  
130 Commerce Dr.  
Montgomeryville, PA 18936

**EMERGENCY INFORMATION**

Emergency telephone number  
(CHEMTREC) (800) 424-9300  
Other calls: (215) 855-8450

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

HAZARDOUS CONSTITUENTS			Exposure limits			
Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Ethyl benzene		100414	1-5	100 ppm	100 ppm	100 (Canada)
Benzyl alcohol	BZOH	100516	1-10	n/e	n/e	10 (AIHA)
Propylene glycol monomethyl ether		107982	30-40	100 ppm	100 ppm	100 (Canada)
Phenol		108952	1-5	5 ppm	5ppm	5 ppm (Canada)
1,6-Diaminohexane		124094	1-5	0.5 ppm	n/e	n/e
Xylene		1330207	20-30	100 ppm	100 ppm	100 (Canada)
Reaction Product of Amine, Phenol and Formaldehyde		68479801	1-10	n/e	n/e	n/e
1,2-Cyclohexanediamine		694837	1-5	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) as established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (\*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

### 3. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance, physical form, odor: Liquid with solvent odor.

**WARNING! Flammable. Keep away from heat, sparks, open flame. Severe eye and skin irritant. May cause skin irritation. Overexposure may cause respiratory tract, mucous membrane irritation. Potential skin and respiratory sensitizer. Can cause CNS effects (evidenced by dizziness, headache, nausea and vomiting). Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing vapor. Use with adequate ventilation. Keep container closed when not in use.**

#### Potential health effects:

##### Primary routes of exposure:

Skin contact     Skin absorption     Eye contact     Inhalation     Ingestion

##### Symptoms of acute overexposure:

###### **Skin:**

Moderate irritant. Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives, defatting).

###### **Eyes:**

Moderate irritant. Contact at elevated temperatures can cause thermal burns. High vapor concentrations may also be irritating.

###### **Inhalation:**

Vapors may irritate nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system (CNS) depression (headache, nausea, giddiness, dizziness). Potential respiratory sensitizer.

###### **Ingestion:**

May cause gastric distress and aspiration (evidenced by coughing). May cause CNS depression.

##### Effects of chronic overexposure:

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Potential respiratory tract sensitizer.

##### Medical conditions which may be aggravated by exposure:

Preexisting eye and skin and respiratory disorders. Development of preexisting skin or lung allergy symptoms may increase.

**Carcinogenicity -- OSHA regulated:** No      **ACGIH:** No      **National Toxicology Program:** No  
**International Agency for Research on Cancer:** No  
**Cancer-suspect constituent(s):** None

##### Other effects:

Xylene: near fatal exposures may result in congestive effects to a wide variety of organs. May effect cardiac system, pulmonary system, nervous system, dermal system, liver and kidney. Also see section 11.

### 4. FIRST AID MEASURES

#### **First aid for eyes:**

Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

#### **First aid for skin:**

Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

**First aid for inhalation:**

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

**First aid for ingestion:**

Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

**5. FIRE FIGHTING MEASURES****Extinguishing media:**

Water       Carbon dioxide       Dry chemical       Foam       Alcohol foam

**Flash Point (°F):** 80

**Method:** TCC

**Explosive limits in air -- Lower:** 1

**Upper:** 7 (xylene)

**Special firefighting procedures:**

Do not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

**Unusual fire and explosion hazards:**

Contains flammable solvent. Do not use in area where sparks or open flames are present.

**Hazardous products of combustion:**

When heated to decomposition it emits fumes of carbon monoxide, other fumes and vapors varying in composition and toxicity.

**6. ACCIDENTAL RELEASE MEASURES****Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area.

**Containment:**

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

**Cleanup:**

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly (RCRA hazardous waste).

**Special procedures:**

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Use non-sparking tools

**7. HANDLING AND STORAGE****Handling precautions:**

Flammable liquid. Keep away from heat, sparks and open flames. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against nuisance dust during sanding/grinding of cured product. Use bonding/grounding straps when transferring liquid.

**Storage precautions:**

Store in a adequately ventilated, cool, dry area away from high temperatures and flames.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering controls****Ventilation:**

General mechanical ventilation is normally sufficient. For prolonged use in confined areas, provide local exhaust (explosion-proof). Ventilation must, in any case, keep vapor concentrations below the TLVs.

**Other engineering controls:**

Have emergency shower and eye wash available.

**Personal protective equipment****Eye and face protection:**

Safety glasses with side shields.

**Skin Protection:**

Chemical-resistant gloves and other gear as required to prevent skin contact.

**Respiratory protection:**

None required at normal handling temperatures and conditions. Use NIOSH approved organic vapor cartridges for uncured resin and dust/particle respirators during grinding/sanding operations of cured resin as exposure levels dictate.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Specific gravity:</b>	0.94	<b>Boiling point (°F):</b>	n/d
<b>Melting point (°F):</b>	n/d	<b>Vapor density (air = 1):</b>	>1
<b>Vapor pressure (mmHg):</b>	n/d	<b>Evaporation rate (butyl acetate = 1):</b>	n/d
	at 0 °F	<b>Solubility in water:</b>	Negligible
<b>VOC (grams/liter):</b>	640	<b>pH (5% solution or slurry in water):</b>	neutral
<b>Percent volatile by volume:</b>	68		0
<b>Percent solids by weight:</b>	32		

**10. STABILITY AND REACTIVITY**

This product is chemically stable.

Hazardous polymerization will not occur.

**Conditions to avoid:**

Open flame, sparks and extreme heat.

**Incompatible materials:**

Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

**Hazardous decomposition products:**

Oxides of carbon; aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500 deg F) degradation.

**Conditions of hazardous polymerization:**

Heat is generated when resin is mixed with curing agents; Run-a-way cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

**11. TOXICOLOGICAL INFORMATION****Acute oral effects:**

LD50 (rat): n/d

No data available.

**Acute dermal effects**

LD50 (rabbit): n/d

**Acute inhalation effects:**

LC50 (rat): n/d in 8 hours

**Eye irritation:**

No data available.

**Subchronic effects**

Absorption of phenolic solutions through the skin may be very rapid and cause death. Lesser exposures can cause damage to the kidneys, liver, pancreas and spleen, and edema of the lungs.

**Chronic effects**

Laboratory animals exposed to xylene have shown hearing loss, and effects to liver, kidneys, lungs, spleen heart, blood and adrenals. Repeated overexposure to phenol can cause effects on the heart and nervous system including changes in heart rate, blood pressure, respiration, as well as tremors and lung disorders. Chronic exposures can cause death from liver and kidney damage.

**Carcinogenicity, teratogenicity, and mutagenicity:**

Developmental toxicity studies with xylene have shown embryolethal/toxic and teratogenic effects with maternal toxicity. Phenol has been shown to produce fetotoxic effects in laboratory animals. Phenol has been shown to be a mutagenic in germ cells, in vivo.

**Toxicological information on hazardous chemical constituents of this product:**

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat, 4 hours)
Ethyl benzene	3500 mg/kg	17800 ppm	>4000 ppm
Benzyl alcohol	1230 mg/kg	2000 mg/kg	> 2000 ppm
Propylene glycol monomethyl ether	5660 mg/kg	13000 mg/kg	n/d
Phenol	317 mg/Kg	630 mg/Kg	316 mg/m <sup>3</sup>
1,6-Diaminohexane	750 mg/kg	1110 mg/kg	n/d
Xylene	4300 mg/kg	>1700 mg/kg	5000 ppm
Reaction Product of Amine, Phenol and Formaldehyde	n/d	n/d	n/d
1,2-Cyclohexanediamine	1 g/kg	n/d	> 3200 mg/m <sup>3</sup>

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

No data available.

**Mobility and persistence:**

No data available.

**Environmental fate:**

No data available.

**13. DISPOSAL CONSIDERATIONS****Waste management recommendations:**

Do not dispose of in a landfill. Incineration is the preferred method of disposal. Dispose of in accordance with all applicable local, state and federal disposal regulations.

**14. TRANSPORT INFORMATION****Proper shipping name:** Resin solution**Technical name:****Hazard class:** 3**UN number:** 1866**Packing group:** III**IMDG Page no.:** 3379**Emergency Response Guide no.:** 127**Other:****15. REGULATORY INFORMATION****U.S. Federal Regulations****TSCA:**

All ingredients of this product are listed, or are exempt from listing, on the TSCA Inventory.

**The following RCRA code(s) applies to this material if it becomes waste:** D001**Regulatory status of hazardous chemical constituents of this product:**

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Ethyl benzene	No	Yes	No	Required
Benzyl alcohol	No	No	No	Not required
Propylene glycol monomethyl ether	No	No	No	Not required
Phenol	Yes	Yes	No	Required
1,6-Diaminohexane	No	No	No	Not required
Xylene	No	Yes	No	Not required
Reaction Product of Amine, Phenol and Formaldehyde	No	No	No	Not required
1,2-Cyclohexanediamine	No	No	No	Not required

\*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substances list.

\*\*Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. Consult the appropriate regulations for specific requirements.

**Classification of this material for SARA Section 312 hazardous materials inventory reporting:**

Immediate health hazard   Delayed health hazard   Fire hazard

**Canadian regulations**

WHMIS hazard class(es):    D2B; B2; D2A

All components of this product are on the Domestic Substances List.

**16. OTHER INFORMATION**

Hazardous Materials Information System (HMIS) ratings:		
Health	Flammability	Reactivity
2*	3	1

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.

**TROWELABLE FLOOR RESURFACER PRIMER RESIN**

Last revised: 09/10/00

Printed: 09/26/00

***1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION***

Chemical family Epoxy resin

General information: This information applies to the resin component of a two-part kit. After curing, the product is not hazardous.

**MANUFACTURER**

ITW Philadelphia Resins  
130 Commerce Dr.  
Montgomeryville, PA 18936

**EMERGENCY INFORMATION**

Emergency telephone number  
(CHEMTREC) (800) 424-9300  
Other calls: (215) 855-8450

***2. COMPOSITION/INFORMATION ON INGREDIENTS***

HAZARDOUS CONSTITUENTS			Exposure limits			
Constituent	Abbr.	CAS No.	Weight percent	ACGIH TLV	OSHA PEL	Other Limits
Ethyl benzene		100414	1-5	100 ppm	100 ppm	100 (Canada)
Xylene		1330207	10-20	100 ppm	100 ppm	100 (Canada)
Bisphenol A diglycidyl ether resin	DGEB PA	25068386	> 60	n/e	n/e	n/e
Alkyl Glycidyl Ether		68081845	10-20	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) as established by the American Conference of Governmental Industrial Hygienists. "STEL" indicates a short-term exposure limit. "PEL" indicates the OSHA Permissible Exposure Limit. "n/e" indicates that no exposure limit has been established. An asterisk (\*) indicates a substance whose identity is a trade secret of our supplier and unknown to us.

***3. HAZARDS IDENTIFICATION*****Emergency Overview**

Appearance, physical form, odor: Liquid with solvent odor.

**WARNING! Flammable. Keep away from heat, sparks, open flame. Severe eye irritant. May cause skin irritation. Overexposure may cause respiratory tract, mucous membrane irritation. Can cause CNS effects (evidenced by dizziness, headache, nausea and vomiting). Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing vapor. Use with adequate ventilation. Keep container closed when not in use.**

**Potential health effects:****Primary routes of exposure:**

Skin contact     Skin absorption     Eye contact     Inhalation     Ingestion

**Symptoms of acute overexposure:****Skin:**

Moderate irritant. Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives, defatting).

**Eyes:**

Moderate irritant. Contact at elevated temperatures can cause thermal burns. High vapor concentrations may also be irritating.

**Inhalation:**

Vapors may irritate nose, throat, and respiratory tract. High vapor concentrations may cause central nervous system (CNS) depression (headache, nausea, giddiness, dizziness).

**Ingestion:**

May cause gastric distress and aspiration (evidenced by coughing). May cause CNS depression.

**Effects of chronic overexposure:**

Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure.

**Medical conditions which may be aggravated by exposure:**

Preexisting eye and skin and respiratory disorders. Development of preexisting skin or lung allergy symptoms may increase.

**Carcinogenicity -- OSHA regulated:** No      **ACGIH:** No      **National Toxicology Program:** No  
**International Agency for Research on Cancer:** No  
**Cancer-suspect constituent(s):** None

**Other effects:**

Xylene: near fatal exposures may result in congestive effects to a wide variety of organs. May effect cardiac system, pulmonary system, nervous system, dermal system, liver and kidney. Also see section 11.

**4. FIRST AID MEASURES****First aid for eyes:**

Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.

**First aid for skin:**

Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.

**First aid for inhalation:**

Remove patient to fresh air. Administer oxygen if breathing is difficult. Get medical attention if symptoms persist.

**First aid for ingestion:**

Do NOT induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

## 5. FIRE FIGHTING MEASURES

**Extinguishing media:**

Water       Carbon dioxide       Dry chemical       Foam       Alcohol foam

**Flash Point (°F):** 80**Method:** TCC**Explosive limits in air -- Lower:** 1**Upper:** 7 (xylene)**Special firefighting procedures:**

Do not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

**Unusual fire and explosion hazards:**

Contains flammable solvent. Do not use in area where sparks or open flames are present.

**Hazardous products of combustion:**

When heated to decomposition it emits fumes of carbon monoxide, other fumes and vapors varying in composition and toxicity.

## 6. ACCIDENTAL RELEASE MEASURES

**Spill control:**

Avoid personal contact. Eliminate ignition sources. Ventilate area.

**Containment:**

Dike, contain and absorb with clay, sand or other suitable non-combustible material.

**Cleanup:**

For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material and dispose of properly (RCRA hazardous waste).

**Special procedures:**

Prevent spill from entering drainage/sewer systems, waterways, and surface waters. Use non-sparking tools

## 7. HANDLING AND STORAGE

**Handling precautions:**

Flammable liquid. Keep away from heat, sparks and open flames. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against nuisance dust during sanding/grinding of cured product. Use bonding/grounding straps when transferring liquid.

**Storage precautions:**

Store in a adequately ventilated, cool, dry area away from high temperatures and flames.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering controls****Ventilation:**

General mechanical ventilation is normally sufficient. For prolonged use in confined areas, provide local exhaust (explosion-proof). Ventilation must, in any case, keep vapor concentrations below the TLVs.

**Other engineering controls:**

Have emergency shower and eye wash available.

**Personal protective equipment****Eye and face protection:**

Safety glasses with side shields.

**Skin Protection:**

Chemical-resistant gloves and other gear as required to prevent skin contact.

**Respiratory protection:**

None required at normal handling temperatures and conditions. Use NIOSH approved organic vapor cartridges for uncured resin and dust/particle respirators during grinding/sanding operations of cured resin as exposure levels dictate.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Specific gravity:</b>	1.0	<b>Boiling point (°F):</b>	n/d
<b>Melting point (°F):</b>	n/d	<b>Vapor density (air = 1):</b>	>1
<b>Vapor pressure (mmHg):</b>	n/d	<b>Evaporation rate (butyl acetate = 1):</b>	n/d
	at 0 °F	<b>Solubility in water:</b>	Negligible
<b>VOC (grams/liter):</b>	190	<b>pH (5% solution or slurry in water):</b>	neutral
<b>Percent volatile by volume:</b>	19		0
<b>Percent solids by weight:</b>	81		

**10. STABILITY AND REACTIVITY**

This product is chemically stable.

Hazardous polymerization will not occur.

**Conditions to avoid:**

Open flame, sparks and extreme heat.

**Incompatible materials:**

Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines).

**Hazardous decomposition products:**

Oxides of carbon; aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500 deg F) degradation.

**Conditions of hazardous polymerization:**

Heat is generated when resin is mixed with curing agents; Run-a-way cure reactions may char and decompose the resin, generating unidentified fumes and vapors which may be toxic.

**11. TOXICOLOGICAL INFORMATION****Acute oral effects:**

LD50 (rat): n/d

No data available.

**Acute dermal effects**

LD50 (rabbit): n/d

**Acute inhalation effects:**

LC50 (rat): n/d in 8 hours

**Eye irritation:**

No data available.

**Subchronic effects**

No data available.

**Chronic effects**

Laboratory animals exposed to xylene have shown hearing loss, and effects to liver, kidneys, lungs, spleen heart, blood and adrenals.

**Carcinogenicity, teratogenicity, and mutagenicity:**

Developmental toxicity studies with xylene have shown embryoethal/toxic and teratogenic effects with maternal toxicity.

**Toxicological information on hazardous chemical constituents of this product:**

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat, 4 hours)
Ethyl benzene	3500 mg/kg	17800 ppm	>4000 ppm
Xylene	4300 mg/kg	>1700 mg/kg	5000 ppm
Bisphenol A diglycidyl ether resin	30 g/kg	>20 ml/kg	no deaths
Alkyl Glycidyl Ether	2450 mg/kg	n/d	n/d

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

No data available.

**Mobility and persistence:**

No data available.

**Environmental fate:**

No data available.

**13. DISPOSAL CONSIDERATIONS****Waste management recommendations:**

Do not dispose of in a landfill. Incineration is the preferred method of disposal. Dispose of in accordance with all applicable local, state and federal disposal regulations.

**14. TRANSPORT INFORMATION**

**Proper shipping name:** Resin solution

**Technical name:** N/A

**Hazard class:** 3

**UN number:** 1866

**Packing group:** III

**IMDG Page no.:**

**Emergency Response Guide no.:** 127

**Other:**

**15. REGULATORY INFORMATION****U.S. Federal Regulations****TSCA:**

All ingredients of this product are listed, or are exempt from listing, on the TSCA Inventory.

The following RCRA code(s) applies to this material if it becomes waste: D001

**Regulatory status of hazardous chemical constituents of this product:**

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Ethyl benzene	No	Yes	No	Required
Xylene	No	Yes	No	Not required
Bisphenol A diglycidyl ether resin	No	No	No	Not required
Alkyl Glycidyl Ether	No	No	No	Required

\*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substances list.

\*\*Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. Consult the appropriate regulations for specific requirements.

**Classification of this material for SARA Section 312 hazardous materials inventory reporting:**

Immediate health hazard    Delayed health hazard    Fire hazard

**Canadian regulations**

WHMIS hazard class(es):    D2B; B2

**16. OTHER INFORMATION**

Hazardous Materials Information System (HMIS) ratings:		
Health	Flammability	Reactivity
2*	3	1

The information and recommendations in this document are based on the best information available to us at the time of preparation, but we make no other warranty, express or implied, as to its correctness or completeness, or as to the results of reliance on this document.