

IMPAX 5020AR ACID RESISTANT FLOOR RESURFACER HARDENER

This product appears in the following stock number(s):

4014U

Last revised: 11/17/04

Printed: 2/7/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** IMPAX 5020AR ACID RESISTANT FLOOR RESURFACER HARDENER**General use:** The information below applies only to the hardener component.. After proper mixing and curing with resin, this product is not hazardous.**Chemical family:** Modified cycloaliphatic amine**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
Benzyl alcohol	BZOH	100516	> 40	n/e	n/e	10 ppm (AIHA)
Isophorone diamine		2855132	< 50	n/e	n/e	n/e
Salicylic acid		69727	< 15	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) 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, form, odor: fishy liquid with amine odor.

DANGER! Corrosive. Eye, skin and respiratory irritant. Potential skin sensitizer.**Potential health effects****Primary routes of exposure:** Skin contact Skin absorption Eye contact Inhalation Ingestion**Symptoms of acute overexposure:****Skin:** May cause severe irritation or burns.**Eyes:** Will cause severe irritation and burns; may cause permanent eye damage.

Inhalation:

High vapor concentrations can cause irritation of respiratory tract with coughing, shallow breathing, choking sensation.

Ingestion:

Can cause chemical burns to mouth, throat, and gastrointestinal tract.

Effects of chronic overexposure:

Prolonged or repeated overexposure may cause skin sensitization, with itching, swelling, or rashes on further exposure.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

Asthma, chronic respiratory disease (e.g. bronchitis, emphysema), eye disease, skin disorders and allergies.

Other effects:

None known.

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

Immediately flush with large amounts of clean water for at least 15 minutes, lifting lids occasionally. Get immediate medical help!

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 effects persist.

First aid for ingestion:

Corrosive--do not induce vomiting. Dilute with milk or water if patient is conscious. Get immediate medical attention.

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

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): >200

Method: PMCC

Explosive limits in air (percent) -- Lower: n/d

Upper: n/d

Special firefighting procedures:

Cool fire-exposed containers with water. Firefighters should wear self-contained breathing apparatus and full protective gear.

Unusual fire and explosion hazards:

Toxic fumes will be evolved when this material is involved in a fire.

Hazardous products of combustion:

Oxides of carbon, oxides of nitrogen, ammonia and unidentified organic combustion products.

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 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. Flush area with water to remove trace residue.

Special procedures:

Prevent spill from entering drainage/ sewer systems, waterways, and surface waters.

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

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.

Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. 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.

Storage:

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

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

Local exhaust is recommended for confined areas. General mechanical ventilation is adequate for normal use.

Other engineering controls :

Keep container tightly closed. Observe label precautions. Have emergency eye wash and safety shower present.

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

Safety glasses with side shields or splashproof goggles

Skin protection:

Chemical-resistant rubber gloves and other impervious protective gear as required to prevent skin contact. Neoprene, nitrile or cuffed butyl rubber are acceptable materials.

Respiratory protection:

None needed in normal use; in poorly ventilated areas, use NIOSH-approved organic vapor respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	1.0	Boiling point (°F):	401
Melting point (°F):	< -0.4	Vapor density (air = 1):	>1
Vapor pressure (mmHg):	< 10 at 0 °F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	0	Solubility in water:	1.6 %
Percent volatile by volume:	0	pH (5% solution or slurry in water):	Alkaline
Percent solids by weight:	100		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

None

Incompatible materials:

Strong oxidants, strong acids (such as sulfuric or hydrochloric acids).

Hazardous products of decomposition:

Oxides of carbon and nitrogen; amines, ammonia, and phenols from incomplete burning

Conditions under which hazardous polymerization may occur:

Heat is released when this hardener reacts with epoxy resins; use caution when mixing large quantities.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): No data available.

No data available.

Acute dermal effects: LD50 (rabbit): No data available.

No data available.

Acute inhalation effects: LC50 (rat): No data available.

Exposure: hours.

No data available.

Eye irritation:

No data available.

Subchronic effects:

None known.

Carcinogenicity, teratogenicity, and mutagenicity:

A component has been shown to cause reproductive/teratogenic effects in laboratory animals.

Other chronic effects:

None known.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Benzyl alcohol	1230 mg/kg	2000 mg/kg	> 2000 ppm
Isophorone diamine	1030 mg/kg	n/d	n/d
Salicylic acid	891 mg/kg	>10gm/kg	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION

Ecotoxicity:

No data available.

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION

Proper shipping name: Isophoronediamine solution

Technical name : N/A

Hazard class : 8

UN number: 2289

Packing group: III

Emergency Response Guide no.: 153

IMDG page number: N/A

Other: N/A

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:

None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Benzyl alcohol	No	No	0.0	Not required
Isophorone diamine	No	No	0.0	Not required
Salicylic acid	No	No	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance 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. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -

Canadian regulations

WHMIS hazard class(es) : E; D2B

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

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	3*	1	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.

IMPAX 5020AR ACID RESISTANT FLOOR RESURFACER RESIN

This product appears in the following stock number(s):

4014U

Last revised: 07/14/03

Printed: 2/7/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** IMPAX 5020AR ACID RESISTANT FLOOR RESURFACER RESIN**General use:** This information applies to the resin component of the two-part kit; handle freshly-mixed resin and hardener as recommended for the hardener. After curing, the product is not hazardous.**Chemical family:** Epoxy resin**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
Epoxy Novolac resin		TRADE SECRET		n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) 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, form, odor: Clear liquid with slight odor.

WARNING! Eye and skin irritant. Potential skin sensitizer.**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).**Eyes:** Moderate irritant. Contact at elevated temperatures can cause thermal burns.**Inhalation:**

The low vapor pressure of the resin makes inhalation unlikely in normal use.

Ingestion:

Acute oral toxicity is low. May cause gastric distress.

Effects of chronic overexposure:

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

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: No

Cancer-suspect constituent(s) : None

Medical conditions which may be aggravated by exposure:

Preexisting eye and skin disorders (allergies, eczema). Development of preexisting skin or lung allergy symptoms may increase.

Other effects:

None known.

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): > 200

Method: PMCC

Explosive limits in air (percent) -- Lower: n/d

Upper: n/d

Special firefighting procedures:

Material will not burn unless preheated. 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:

Heating above 300 deg F in the presence of air may cause slow oxidative decomposition and above 500 deg F may cause polymerization.

Hazardous products of combustion:

When heated to decomposition it emits fumes of carbon monoxide and 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 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. Flush area with water to remove trace residue.

Special procedures:

Prevent spill from entering drainage/sewer systems, waterways, and surface waters.

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

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.

Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. 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.

Storage:

Store in a cool, dry area away from high temperatures and flames. Keep containers closed when not in use.

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

Local exhaust ventilation is preferred although good general mechanical ventilation is usually adequate for most industrial applications. Local exhaust is recommended for confined areas.

Other engineering controls :

Have emergency shower and eye wash available.

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

Wear splash-proof chemical goggles.

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

Specific gravity:	1.2	Boiling point (°F):	> 200 deg C
Melting point (°F):	n/d	Vapor density (air = 1):	>1
Vapor pressure (mmHg):	< 0.001 at 171 °F	Evaporation rate (butyl acetate = 1):	<<1
VOC (grams/liter):	n/d	Solubility in water:	Negligible
Percent volatile by volume:	n/d	pH (5% solution or slurry in water):	neutral
Percent solids by weight:	n/d		

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Open flame 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 products of decomposition:

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

Conditions under which hazardous polymerization may occur:

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): > 5000 mg/kg

Acute dermal effects: LD50 (rabbit): > 3000 mg/kg

Moderate irritant (rabbits). Moderate sensitizer.

Acute inhalation effects: LC50 (rat): > 1.7 mg/L (aerosol)

Exposure: 4 hours.

Eye irritation:

Slight irritant (rabbits)

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

Positive Ames test with and without microsomal activation. This material did not cause cancer in laboratory animals when applied to the skin for two years.

Other chronic effects:

No data available

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Epoxy Novolac resin	> 5000 mg/kg	> 6000 mg/kg	> 1.7 mg/L

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

No data available.

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

Waste management recommendations:

If this resin becomes a waste, it would not be a hazardous waste by RCRA criteria (40CFR 261). Dispose of according to applicable federal, state, and local regulations.

14. TRANSPORT INFORMATION**Proper shipping name:** Non-regulated**Technical name :** N/A**Hazard class :** N/A**UN number:** N/A**Packing group:** N/A**Emergency Response Guide no.:** N/A**IMDG page number:** N/A**Other:** N/A

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:

None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Epoxy Novolac resin	No	No	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance 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. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -

Canadian regulations

WHMIS hazard class(es) : D2B

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

16. OTHER INFORMATION

Hazardous Materials Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	2*	1	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.

IMPAX 5020 FLOOR RESURFACER PRIMER HARDENER

This product appears in the following stock number(s):

4011U 4014U 4024U 4056U 4059U

Last revised: 10/02/03

Printed: 2/7/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** IMPAX 5020 FLOOR RESURFACER PRIMER HARDENER**General use:** This information applies to the hardener component of the two-part kit. After curing, the product is not hazardous.**Chemical family:** Epoxy Curing Agent Solution**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	1-10	100 ppm	100 ppm	100 ppm (Canada)
Benzyl alcohol	BZOH	100516	< 25	n/e	n/e	10 ppm (AIHA)
Propylene glycol monomethyl ether		107982	30-60	100 ppm	100 ppm	100 ppm (Canada)
Phenol		108952	< 10	5 ppm	5ppm	5 ppm (Canada)
1,6-Diaminohexane		124094	< 10	0.5 ppm	n/e	5 mg/m3 (AIHA-WEEL)
Xylene		1330207	20-40	100 ppm	100 ppm	100 ppm (Canada)
2-methoxy-1-propanol		1589475	< 1	n/e	n/e	n/e
Reaction Product of Amine, Phenol and Formaldehyde		68479801	< 25	n/e	n/e	n/e
1,2-Cyclohexanediamine		694837	< 10	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) 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, form, odor: Liquid with solvent odor.

WARNING! Flammable. Eye, skin and respiratory irritant. Potential skin and respiratory sensitizer. May cause central nervous system effects.

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. TARGET ORGANS: Eye, skin, liver or hepatic system, kidney, spleen, pancreas, respiratory systems & CNS.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: Yes

Cancer-suspect constituent(s) : Ethyl benzene

Medical conditions which may be aggravated by exposure:

Asthma, chronic respiratory disease (e.g. bronchitis and emphysema), eye disease, kidney disorders, liver disorders, skin disorders and allergies.

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 (percent) -- 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:

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

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

10. STABILITY AND REACTIVITY

This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid :

Open flame, sparks and extreme heat.

Incompatible materials:

Mineral and organic acids. Oxidizers. Reactive metals (sodium, calcium, zinc, etc). Peroxides. Sodium or Calcium hypochlorite.

Hazardous products of decomposition:

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

Conditions under which hazardous polymerization may occur:

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

Exposure: 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.

Carcinogenicity, teratogenicity, and mutagenicity:

1) Phenol has been shown to produce fetotoxic effects in laboratory animals. Phenol has been shown to be a mutagenic in germ cells, in vivo. 2) Developmental toxicity studies with xylene have shown embryo-lethal/toxic and teratogenic effects with maternal toxicity. 3) This product contains ethyl benzene. A study conducted by the National Toxicity Program states that lifetime inhalation exposure of rats and mice to concentrations of ethyl benzene (750 ppm) resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations of ethyl benzene (75 ppm or 250 ppm). This study does not address the relevance of these results to humans.

Other 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.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
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	> 3600 mg/m ³
1,6-Diaminohexane	750 mg/kg	1110 mg/kg	n/d
Xylene	4300 mg/kg	>1700 mg/kg	5000 ppm
2-methoxy-1-propanol	n/d	n/d	n/d
Reaction Product of Amine, Phenol and Formaldehyde	n/d	n/d	n/d
1,2-Cyclohexanediamine	1 g/kg	n/d	> 3200 mg/m ³

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION

Ecotoxicity:

No data available.

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

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
Emergency Response Guide no.: 127
IMDG page number: N/A
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	1000.0	Required
Benzyl alcohol	No	No	0.0	Not required
Propylene glycol monomethyl ether	No	No	100.0	Not required
Phenol	Yes	Yes	1000.0	Required
1,6-Diaminohexane	No	No	0.0	Not required
Xylene	No	Yes	100.0	Not required
2-methoxy-1-propanol	No	No	0.0	Not required

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Reaction Product of Amine, Phenol and Formaldehyde	No	No	0.0	Not required
1,2-Cyclohexanediamine	No	No	0.0	Not required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance 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. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - 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 Identification System (HMIS) ratings:	Health	Flammability	Reactivity
	2*	3	1

Revisions for this issue:

MSDS section	Revisions
3	Ethyl benzene updated to IARC 2B

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.

IMPAX 5020 FLOOR RESURFACER PRIMER RESIN

This product appears in the following stock number(s):

4011U 4014U 4024U 4056U 4059U

Last revised: 10/02/03

Printed: 2/7/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** IMPAX 5020 FLOOR RESURFACER PRIMER RESIN**General use:** This information applies to the resin component of a two-part kit. After curing, the product is not hazardous.**Chemical family:** Epoxy resin**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 ppm (Canada)
Xylene		1330207	10-20	100 ppm	100 ppm	100 ppm (Canada)
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	> 60	n/e	n/e	n/e
Alkyl Glycidyl Ether		68609972	10-20	n/e	n/e	n/e

"TLV" means the Threshold Limit Value exposure (eight-hour, time-weighted average, unless otherwise noted) 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, form, odor: Liquid with solvent odor.

WARNING! Flammable. Eye, skin and respiratory irritant. Potential skin sensitizer. May cause central nervous system effects.

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). May injure lung.

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.

Carcinogenicity -- OSHA regulated: No

ACGIH: No

National Toxicology Program: No

International Agency for Research on Cancer: Yes

Cancer-suspect constituent(s) : Ethyl benzene

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.

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 (percent) -- 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:

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

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

10. STABILITY AND REACTIVITY

This material 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 products of decomposition:

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

Conditions under which hazardous polymerization may occur:

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

Exposure: 8 hours.

Eye irritation:

No data available.

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

1) Developmental toxicity studies with xylene have shown embryo-lethal/toxic and teratogenic effects with maternal

toxicity. 2) This product contains ethyl benzene. A study conducted by the National Toxicity Program states that lifetime inhalation exposure of rats and mice to concentrations of ethyl benzene (750 ppm) resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations of ethyl benzene (75 ppm or 250 ppm). This study does not address the relevance of these results to humans.

Other chronic effects:

Laboratory animals exposed to xylene have shown hearing loss, and effects to liver, kidneys, lungs, spleen heart, blood and adrenals. Prolonged or repeated skin contact may cause sensitization, with itching, swelling, or rashes on later exposure. Studies have shown bisphenol A diglycidyl ether resin to cause allergic contact dermatitis.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Ethyl benzene	3500 mg/kg	17800 ppm	>4000 ppm
Xylene	4300 mg/kg	>1700 mg/kg	5000 ppm
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20 ml/kg	no deaths
Alkyl Glycidyl Ether	>19.2 g/kg	> 4.5 g/kg	n/d

'n/d' = 'not determined'

12 ECOLOGICAL INFORMATION**Ecotoxicity:**

No data available.

Mobility and persistence:

No data available.

Environmental fate:

No data available.

13. DISPOSAL CONSIDERATIONS

Please see also Section 15, Regulatory Information.

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
Emergency Response Guide no.: 127
IMDG page number: N/A
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	1000.0	Required
Xylene	No	Yes	100.0	Not required
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required
Alkyl Glycidyl Ether	No	No	0.0	Required

*Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance 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. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: - Immediate health hazard -- Delayed health hazard -- Fire hazard -

Canadian regulations

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

16. OTHER INFORMATION

**Hazardous Materials
Identification System (HMIS)
ratings:**

Health**2*****Flammability****3****Reactivity****1****Revisions for this issue:**

MSDS section	Revisions
3	Ethyl benzene updated to IARC 2B

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.