

IMPAX 300 RESIN GRAY

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

2324U 2325R

Last revised: 03/15/05

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** IMPAX 300 RESIN GRAY**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
Propylene glycol monomethyl ether		107982	1-5	100 ppm	100 ppm	100 ppm (Canada)
1-methoxy-2-propanol acetate	PGMEA	108656	< 1	n/e	n/e	100 ppm (AIHA-WEEL)
Methyl N-Amyl Ketone		110430	1-5	50 ppm	100 ppm	n/e
Xylene		1330207	1-10	100 ppm	100 ppm	100 ppm (Canada)
Carbon black		1333864	< 5	3.5 mg/m ³	3.5 mg/m ³	n/e
Crystalline silica		14808607	16-20	0.05 mg/m ³	10/(%Q+2) mg	0.10 mg/m ³ (Canada)
Bisphenol A diglycidyl ether resin	DGEBPA	25068386	5-15	n/e	n/e	n/e
Light aromatic naphtha		64742956	< 10	100 ppm	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: Pigmented viscous paste with little 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: Irritant. May cause skin sensitization (rashes, hives, defatting). Contains material that may be moderately toxic by absorption. May cause chemical burns and allergic skin reaction which can be severe in certain individuals.

Eyes: Severe 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). Inhalation may cause allergic respiratory reaction.

Ingestion:

Contains materials that may be slightly toxic. May cause gastric distress and aspiration (evidenced by coughing). May cause CNS depression.

Effects of chronic overexposure:

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

Carcinogenicity -- OSHA regulated: No

ACGIH: Yes

National Toxicology Program: Yes

International Agency for Research on Cancer: Yes

Cancer-suspect constituent(s) : Respirable Carbon Black, Crystalline silica

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. 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. Get medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water Carbon dioxide Dry chemical Foam Alcohol foam**Flash Point (°F):** 81**Method:** SETA**Explosive limits in air (percent) -- Lower:** 2.7 **Upper:** 11.8**Special firefighting procedures:**

Firefighters should wear self-contained breathing apparatus to avoid inhalation of smoke or vapors. Water may be used to cool exposed containers.

Unusual fire and explosion hazards:

Contains flammable solvent. Remove all ignition sources. Do not use in area where sparks or open flames are present. Closed containers may rupture (due to build-up of pressure) when exposed to extreme heat.

Hazardous products of combustion:

Carbon monoxide, carbon dioxide, unknown toxic vapors.

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). Flush contaminated area with water.

Special procedures:

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

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

Avoid heat, sparks and open flame when handling. 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 silicon dioxide / silica, carbon black and 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. Do not exceed 110 degrees F in storage area.

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

Use ventilation that is adequate to keep employee exposure to airborne concentrations below exposure limits (or to the lowest feasible levels when limits have not been established). Although good general mechanical ventilation is usually adequate for most industrial applications, local exhaust ventilation is preferred (see ACGIH - Industrial Ventilation). Local exhaust may be required for confined areas (see OSHA 1910.146).

Other engineering controls :

Have emergency shower and eye wash available.

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

Chemical splash-proof goggles.

Skin protection:

Chemical-resistant rubber gloves and other protective gear as needed to prevent skin contact. The breakthrough time of the selected glove(s) must be greater than the intended use period.

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:	1.91	Boiling point (°F):	> 240
Melting point (°F):	n/d	Vapor density (air = 1):	> 1
Vapor pressure (mmHg):	8 mm Hg at 68 °F	Evaporation rate (butyl acetate = 1):	< 1
VOC (grams/liter):	n/d	Solubility in water:	soluble
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, 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
Carbon black (1 hr, rat) LC50=27,000 mg/m3

Exposure: 8 hours.

Eye irritation:

No data available.

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

1) **MUTAGENICITY:** Liquid resins based on diglycidyl ether of Bisphenol A (DGEbPA), have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown. 2) **CARCINOGENICITY:** Recent 2-year bioassays in rats and mice exposed by the dermal route to DGEbPA yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. 3) The International Agency for Research on Cancer (IARC) concluded that DGEbPA is not classifiable as a carcinogen (IARC group 3), that is human and animal evidence of carcinogenicity is inadequate. 4) Developmental toxicity studies with xylene have shown embryolethal/toxic and teratogenic effects with maternal toxicity. 5) Carbon black has been shown to have In Vivo mutagenic effects on a rat lung cells.

Other chronic effects:

Laboratory animals exposed to xylene have shown hearing loss, and effects to liver, kidneys, lungs, spleen heart, blood and adrenals. Respirable crystalline quartz may cause chronic lung injury (silicosis). Acute or rapid silicosis may occur in a short period of time in heavy exposure in certain occupations such as sandblasters. Silicosis is a form of disabling pulmonary fibrosis which can be progressive and may lead to death. Pulmonary function may be reduced by inhalation of respirable crystalline silica. It may produce lung scarring which may lead to a progressive massive fibrosis, increasing susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by right heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
Propylene glycol monomethyl ether	5660 mg/kg	13000 mg/kg	n/d
1-methoxy-2-propanol acetate	n/d	n/d	n/d
Methyl N-Amyl Ketone	1670 mg/kg	12.6 ml/kg	2000-4000 ppm
Xylene	4300 mg/kg	>1700 mg/kg	5000 ppm
Carbon black	n/d	n/d	6750 mg/m3
Crystalline silica	n/d	n/d	n/d
Bisphenol A diglycidyl ether resin	11.4 g/kg	>20 ml/kg	no deaths
Light aromatic naphtha	n/d	n/d	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
Propylene glycol monomethyl ether	No	No	100.0	Not required
1-methoxy-2-propanol acetate	No	No	100.0	Not required
Methyl N-Amyl Ketone	No	No	100.0	Not required
Xylene	No	Yes	100.0	Not required
Carbon black	No	No	0.0	Not required

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs)	TSCA 12B Export Notification
Crystalline silica	No	No	0.0	Not required
Bisphenol A diglycidyl ether resin	No	No	0.0	Not required
Light aromatic naphtha	No	No	100.0	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

Regulatory notes:

The Black and Gray Base Components contain carbon black (IARC carcinogen), the Red and Yellow base components do not contain carbon black.

16. OTHER INFORMATION

Hazardous Materials Identification 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.

IMPAX 300 HARDENER

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

2324H 2324U 2325R

Last revised: 01/20/05

Printed: 3/15/2005

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Tradename:** IMPAX 300 HARDENER**General use:** The following information applies only to the hardener component of the two-part kit in all colors.**Chemical family:** Epoxy Resin Hardener**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
1-methoxy-2-propanol		107982	10-25	100 ppm	100 ppm	100 ppm (Canada)
Polyamide/Epoxy Adduct		68424419	60-70	n/e	n/e	n/e
Polyamines & Fatty Acids Reactant		68443083	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: Amber liquid with solvent odor.

WARNING! Flammable. Eye, skin and respiratory irritant. Potential skin sensitizer. Harmful if absorbed through skin. 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:** Causes severe irritation or burns. May be absorbed through skin in harmful amounts.**Eyes:** Causes severe irritation or burns. May cause permanent visual impairment

Inhalation:

May cause upper respiratory irritation. Potential CNS effects (drowsiness, dizziness, nausea).

Ingestion:

May cause burns of mouth and throat. Contains material that is slightly toxic.

Effects of chronic overexposure:

Prolonged or repeated skin contact can cause irritation (rash, corrosion); prolonged or repeated inhalation can cause neural dysfunction with dizziness, drowsiness, loss of coordination, tightness of chest, cough, shortness of breath. Adverse eye effects (conjunctivitis, corneal damage) Target Organs: Eye, GI system, liver, kidney, CNS, Respiratory system and skin.

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:

Allergy, eczema, and other skin conditions (dermatitis).

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

Flush with water for at least 15 minutes and seek medical attention.

First aid for skin:

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.

First aid for ingestion:

Get medical help. Do not induce vomiting; if patient vomits, keep head below hips to prevent drawing vomitus into lungs.

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

Water

Carbon dioxide

Dry chemical

Foam

Alcohol foam

Flash Point (°F): > 100

Method: PMCC

Explosive limits in air (percent) -- Lower: ND

Upper: ND

Special firefighting procedures:

Firefighters should wear self-contained breathing apparatus and protective clothing. Water spray may be used to cool fire-exposed containers and to flush spills away from fire exposure.

Unusual fire and explosion hazards:

Heat of a fire may cause closed containers to burst. Solvent vapor can travel along floors to an ignition source.

Hazardous products of combustion:

Carbon monoxide, carbon dioxide, and oxides of nitrogen.

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.

Laundry 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. Use bonding/ grounding straps when transferring liquid. Do not use sodium nitrite or other nitrosating agents with product as cancer-causing nitrosamines could be formed.

Storage:

Store in a adequately ventilated, cool, dry area away from high temperatures and flames. Do not store in reactive metal containers.

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:**

Safety glasses with side shields.

Skin protection:

Impervious rubber or plastic gloves; clean long-sleeved and long-legged clothing.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn; use NIOSH-approved air-supplying or air-purifying organic vapor respirator. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific gravity:	0.96	Boiling point (°F):	280
Melting point (°F):	n/d	Vapor density (air = 1):	n/d
Vapor pressure (mmHg):	9.2 at 77 °F	Evaporation rate (butyl acetate = 1):	> 1
VOC (grams/liter):	220 (max)	Solubility in water:	Partially
Percent volatile by volume:	24	pH (5% solution or slurry in water):	n/d
Percent solids by weight:	76		

10. STABILITY AND REACTIVITY

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

Conditions to avoid :

Excessive heat

Incompatible materials:

Strong Oxidizing agents

Hazardous products of decomposition:

Oxides of nitrogen and carbon; ammonia. Irritating and toxic fumes. Nitric acid (TLV= 2 ppm). Aldehydes. Nitrosamines.

Conditions under which hazardous polymerization may occur:

Heat is released when this material is mixed with epoxy resin; be careful when mixing a pound or more.

11. TOXICOLOGICAL INFORMATION

Acute oral effects: LD50 (rat): Not available

Acute dermal effects: LD50 (rabbit): Not available

Acute inhalation effects: LC50 (rat): Not available

Exposure: 4 hours.

Subchronic effects:

No data available.

Carcinogenicity, teratogenicity, and mutagenicity:

No data available.

Other chronic effects:

It has been generally observed in animal studies that aliphatic amines can cause changes in the lungs, liver, kidneys and heart.

Toxicological information on hazardous chemical constituents of this product:

Constituent	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 4hr, (rat)
1-methoxy-2-propanol	5660 mg/kg	13000 mg/kg	n/d
Polyamide/Epoxy Adduct	n/d	n/d	n/d
Polyamines & Fatty Acids Reactant	n/d	n/d	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 state, federal and local 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
1-methoxy-2-propanol	No	No	100.0	Not required
Polyamide/Epoxy Adduct	No	No	0.0	Not required
Polyamines & Fatty Acids Reactant	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) : B2;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*	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.