

Material Safety Data Sheet

Revision Date: 12/20/98

NA = Not Applicable NE = Not Established

Section 1. General Information

Product name: **IPANOL E-FLEX – HARDENER – Component B**NFPA Hazard Codes: Health: 3
Fire: 2
Reactivity: 0
Unusual Reaction Hazard: Corrosive

DOT Hazard Classification: Corrosive liquid, N.O.S.

UN/NA Number: 1760

DOT Labels: Corrosive, N.O.S.

Manufacturer: **IPA Systems, Inc.**
2745 North Amber Street, Philadelphia, Pa. 19134
Phone: 800-523-3834 • 215-425-6607
Fax: 215-425-6234
E-mail: info@ipasystems.com
Website: www.ipasystems.com

Emergency Phone Number - Chemtrec: 800-424-9300

Section 2. Hazardous Ingredients

<u>Name:</u>	<u>C.A.S. No.</u>	<u>Percent</u>
Phenol, 4-nonyl-, branched	84852-15-3	35 – 45
TRIS (2, 5, 6 dimethylaminomethyl) phenol	90-72-2	2 – 5
BIS (hexamethylene) triamine	143-23-7	10 – 20
1, 2 – diaminocyclohexane	694-83-7	5 – 10
Polyoxyalkyleneamine	9046100	10 – 15
Titanium dioxide	13463-67-7	15 – 20
Hydrophobic amorphous silica	67762-90-3	0.5 – 1.5
1, 2 –cyclohexanediamine	694-83-7	3 – 5
Benzyl alcohol	100-51-6	3 – 5

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Section 3. Physical Data

Boiling Point (F): > 450°F

Specific Gravity (H₂O = 1): .96 – .99

Vapor Pressure (mm Hg.): 2

Percent Volatile by Volume: Negligible

Vapor Density (Air = 1): > 1

Evaporation Rate: < 1 BUDAC = 1

Solubility in Water: Slight

pH: NA

Volatile Organic Compounds: NA

VOC Less H₂O & Exempt Solvents: NA

Viscosity: < 14 Poises

Melting Point: NA

Appearance and Odor: Clear amber liquid, ammonia odor

Section 4. Fire and Explosion Hazard Data

Flash Point: >200°F

Flammable Limits: LEL = NE UEL = NE

Autoignition Temperature: NE

Extinguishing Media: Water Spray, Carbon Dioxide, Dry Chemical, Foam, Alcohol Type Foam

Special Fire Fighting Procedures: Firefighters should wear full protective clothing including helmet, self-contained positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask and protective covering for exposed areas of the head.

Unusual Fire and Explosion Hazards: Combustible: Combustion also may occur in the presence of other fuels. Heating can release vapors that can be ignited. Hazardous gases/vapors produced in fire are carbon monoxide, oxides of nitrogen and highly toxic cyanide fumes.

NFPA Hazard Codes: Health: 3

Fire: 2

Reactivity: 0

Unusual Reaction Hazard: Corrosive

OSHA Fire Hazard Class: Class IIIB Combustible Liquid

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Section 5. Health Hazard Data

Emergency and First Aid Procedures:

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes. Get medical attention immediately.

Skin Contact: Remove contaminated clothing. Immediately wash skin with soap and large amounts of water. If signs/symptoms occur, call a physician. Wash contaminated clothing before reuse and dispose of contaminated shoes.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get medical attention immediately.

If swallowed: Do not induce vomiting. Immediately give two glasses of water or activated charcoal slurry. Call a physician immediately. Never give anything by mouth to an unconscious person.

NOTE: To prepare activated charcoal slurry, suspend 50 gms. activated charcoal in 400 ml. water and mix thoroughly. Give 5 ml./kg. of body weight, or 350 ml. for an average adult.

NOTE TO PHYSICIAN: After ingestion the patient may improve after the initial crisis, but perforation of the gastrointestinal tract may occur 2 – 4 days later with severe abdominal pain, rigidity and tenderness of the abdomen and shock. Weeks to months later, stricture of the esophagus may occur.

Symptoms:

Eye Contact: Severe eye irritation: Signs/symptoms can include redness, swelling, pain and tearing. Cloudy appearance of the cornea, impaired vision and possible permanently impaired vision.

Skin Contact: Allergic skin reaction: Signs/symptoms can include redness, swelling, blistering and itching.

Severe skin irritation: Signs/symptoms can include redness, swelling, itching and dryness, cracking, blistering and pain. May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.

Inhalation: Central nervous system effects: Signs/symptoms can include emotional changes, lack of coordination, tremors and sensory loss.

Irritation (upper respiratory): Signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

If swallowed: Ingestion is not a likely route of exposure to this product.

Damage to gastrointestinal tissues: Signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, burns of mouth, difficulty swallowing, blood in vomitus and blood in feces and ulcerations.

Kidney effects: Signs/symptoms can include reduced urine volume, blood in urine, back pain.

Liver effects: Signs/symptoms can include yellow skin (jaundice) and tenderness of upper abdomen.

Central nervous system depression: Signs/symptoms can include emotional changes, lack of coordination, tremors and sensory loss.

– Continued on next page –

Material Safety Data Sheet

Revision Date: 12/20/98

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Section 5. Health Hazard Data

– Continued from previous page –

Exposure Limits:

<u>Ingredient</u>	<u>Value</u>	<u>Unit</u>	<u>Type</u>	<u>Auth</u>	<u>Skin*</u>
Phenol, 4 nonyl-, branched	None	None	None	None	
TRIS (2, 4, 6 dimethylamnomethyl) phenol	5	PPM	None	CMRG	Y
BIS hexamethylenediamine	2.3	mg/m ³	TWA	ACGIH	
1, 2 – diaminocyclohexane	None	None	None	None	
Titanium dioxide	10	mg/m ³	TWA	OSHA	
Titanium dioxide	10	mg/m ³	TWA	ACGIH	
Benzyl alcohol	None	None	None	None	
1, 2 –cyclohexanediamine	None	None	None	None	

* Skin notation: Listed substances indicated with "Y" under Skin refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

Source of exposure limit data:

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

CMRG: Chemical Manufacturer Recommended Exposure Guidelines

None: None established

Section 6. Reactivity Data

Stability: Stable

Incompatibility (Materials/Conditions to Avoid Contact): Strong oxidizing agents, reducing agents, heat.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition or By-Products: Carbon monoxide, carbon dioxide, oxides of nitrogen.

Section 7. Procedures for Safe Handling and Use

Spill Response: Observe precautions from other sections of this MSDS. Ventilate area. Contain spill. Cover with absorbent material. Collect spilled material. Clean up residue. Place in an approved metal container. Seal the container.

Waste Disposal Method: Cure product according to product instructions. Incinerate uncured waste in an industrial or commercial incinerator. Dispose of completely cured (or polymerized) material in a sanitary landfill.

This Product may be an RCRA hazardous waste upon disposal due to the corrosive characteristic.

Regulatory Information: Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number: None (not U.S. EPA hazardous).

Treatment, Storage, transportation and disposal must be in accordance with applicable federal, state and local regulations. Recover non-usable free liquid and dispose of it in an approved and permitted incinerator or biological treatment system. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill. Do not flush this to surface water or sanitary sewer system

– Continued next page –

Material Safety Data Sheet

Revision Date: 12/20/98

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Section 7. Procedures for Safe Handling and Use

– Continued from previous page –

EPCRA Hazard Class: Fire hazard: No
Pressure: No
Reactivity: Yes
Acute: Yes
Chronic: Yes

The information on this data sheet represents our current data and best opinion as to the proper use and handling of this product under normal conditions. Any use of the product which is not in conformance with this data sheet or which involves using the product in combination with any other product or any other process is the responsibility of the user.

Section 8. Control Measures

Eye Protection: Avoid eye contact. The following should be worn alone or in combination, as appropriate, to prevent eye contact: Wear unvented goggles during operations in which exposure is likely. Wear full-face shield.

Skin Protection: Avoid skin contact. Wear appropriate gloves when handling this material. Gloves made of neoprene or nitrile rubber are recommended. Use apron and/or coveralls, as necessary, to prevent skin contact.

Ventilation: Provide sufficient ventilation to maintain emissions below recommended exposure limits. If exhaust ventilation is not adequate, use appropriate respiratory protection.

Respiratory Protection: Avoid breathing of vapors. Select NIOSH approved half-mask respirator for organic vapors based on airborne concentration of contaminants and in accordance with OSHA regulations.

Prevention of Accidental Ingestion: Wash hands after handling and before eating.

Recommended Storage: Store away from acids. Store away from heat. Keep container dry.

Fire and Explosion Avoidance: NA

Section 9. Special Precautions

Hygienic Practices in Handling and Storage: Wash exposed skin areas immediately after contact. Severe burning may begin minutes after skin contact. Flush with plenty of water. Seek medical attention immediately. Keep from freezing.

Precautions for Repair and Maintenance of Contaminated Equipment: Wash mixing equipment with water. Normal industrial and construction practices for maintenance of concrete mixing and placing equipment may be followed.

Other Precautions: Addition of IPANOL E-FLEX to concrete creates a mixture that should be handled with standard practices and safety methods. Once mixed in concrete in accordance with manufacturer's instructions, no additional precautions should be required.

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Section 10. State Regulatory Information

RCRA Status:

May be a hazardous waste under RCRA (40 CFR 261) upon disposal due to the corrosivity character.

CERCLA Status:

If spilled and not recovered, or if recovered as a waste for treatment or disposal, reportable quantity is 200 pounds (release of an unlisted hazardous waste characteristic of corrosivity).

SARA / Title III – Toxic Chemicals List:

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

Toxic Substances Control Act (TSCA):

All ingredients of this product are listed on the TSCA inventory. This product contains the following chemical(s) that require export notification under Section 12 (b) of the Toxic Substances Control Act:

4-nonyl phenol

Canadian Inventory Status:

All components included on the Domestic Substances List (DSL).

Chemicals specifically listed and other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.