

MATERIAL SAFETY DATA SHEET

ARMORPOXY, INC.
805 LEHIGH AVE
UNION, NJ 07083
EMERGENCY PHONE 908-810-9613

HEALTH -1*
FLAMMABILITY-1
REACTIVITY-1
PREPARATION DATE 1/15/14
REVISION DATE-NONE

SECTION 1 CHEMICAL PRODUCTS IDENTIFICATION

Trade Name: Armorpoxy SGPX Single Component Coating
Chemical Family: Aliphatic Single Component Coating
Chemical Name: Isophorone diisocyanate based coating

SECTION II HAZARDOUS INGREDIENTS

Component Name	OSHA	ACGIH
Isophorone Diisocyanate CAS-4098-71-9	Not Established	.045 ppm mg/m3 8hrs /TWA
Urethane Bisoxazolidine	Specific identity was Withheld as a trade Secret by manufacturer	not established
Xylene	1330-20-7	

*For regulatory and state right to know information on this products, please refer to the regulatory information section of this msds.

SECTION 3.....HAZARDS IDENTIFICATION

* **EMERGENCY OVERVIEW** *
* *
* **WARNING! DANGER.** Colorless to slightly yellow liquid. Slightly *
* pungent. High inhalation hazard-allergic sensitizer. Severe skin and eye *
* irritant. Irritating to gastrointestinal tract. *
* *

POTENTIAL HEALTH EFFECTS:

Routes of Entry:.....Skin. Inhalation. Eye.

Human Effects and Symptoms of Overexposure:

INHALATION: Inhalation would be expected to cause irritation of the nose, mouth, throat and lungs. Inhalation may cause asthma-like symptoms, including coughing, wheezing, tightness of the chest, shortness of breath and headache.

SKIN.....: Severe skin irritant; allergic sensitizer. This material may be adsorbed through the skin.

EYE.....: May result in severe irritation and possible damage to the cornea and impairment of vision. The effects of high vapor concentration may vary from slight irritation (with tearing and a burning

3. HAZARDS IDENTIFICATION (Continue)

sensation to keratitis (inflammation of the cornea) and impairment of vision.

INGESTION.....: Not a likely route of exposure. Ingestion may cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting, lethargy, or diarrhea.

CHRONIC HEALTH EFFECTS: Prolonged or repeated exposure to vapors may cause lung damage. Repeated overexposure to isocyanate and high one time accidental exposures have been associated with gradual decrease in lung function. Repeated inhalation may also cause allergic sensitization of the respiratory tract, resulting in coughing, wheezing, shortness of breath, chest tightness, and other asthma-like symptoms that may well be life-threatening. Repeated skin contact may cause irritation and allergic dermatitis.

MEDICAL CONDITIONS:

AGGRAVATED BY EXPOSURE.....: History or presence of allergic disease. Exposure may aggravate one or more of the following: Asthma or asthmatic bronchitic medical history.

4. FIRST AIR MEASURES:

FIRST AID FOR EYES.....: Flush with copious amount of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

FIRST AID FOR SKIN.....: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

FIRST AID FOR INHALATION: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult physician should this occur.

FIRST AID FOR INGESTION...: DO NOT INDUCE VOMITING. Wash mouth out with water. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult a physician

NOTE TO PHYSICIAN.....: Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Assess extent and severity of tissue injury by appropriate diagnostic studies and procedures. Bronchodilators may be indicated.

5. FIRE FIGHTING MEASURES:

FLASH POINT Not determined

Autoignition Temperature.....: Not determined

Flammable Limits: Lower: 1 vol% Upper: No data

EXTINGUISHING MEDIA.....: Dry Chemical; CarbonDioxide; Foam; Water spray for large fire

SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment with self-contained breathing Apparatus and full protective clothing should be worn by firefighters. During a fire, IPDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. (See Employee Protection Recommendations). Major Spill: Call Marine Fenders Int'l. Inc. at 310-834-7037. If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities maybe pumped into closed, but not sealed, container for disposal. Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (80%) with non=ionic surfactant Tergitol TMN-10 (20%), or; water (90%), concentrated ammonia (3-8%) and detergent (2%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let CO₂ escape. Clean-up: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE (MIN/MAX): Below 122 F (50 C)

SHELF LIFE.....: 6 Months

SPECIAL SENSITIVITY.....: If container is exposed to high heat, 160° F (71° C) it can be Pressurized and possible rupture. IPDI reacts slowly with water to form CO₂ gas. This gas can cause Sealed containers to expand and possible rupture.

HANDLING/STORAGE PRECAUTIONS: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors of heated IPDI can be dangerous. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

8. PERSONAL PROTECTION:

EYE PROTECTION REQUIREMENTS.: Chemical goggles should be used in a splash hazard environment. For Additional protection, chemical goggles should be used in combination with a full face shield.

SKIN PROTECTION REQUIREMENTS: Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

VENTILATION REQUIREMENTS.....: Local exhaust should be used to maintain levels below the TLV whenever IPDI is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (i.e., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation.

RESPIRATOR REQUIREMENTS.....: Airborne IPDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when IPDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air-purifying respirator (APR). If an APR is selected, the following conditions must be met: (1) (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or (1) (b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their

service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program, and (2) the airborne IPDI concentration must be no greater than 10 times the TLV or PEL. The recommended APR cartridge is an organic vapor/HEPA combination cartridge (OV/P100).

MONITORING.....: Airborne IPDI concentrations should be measured when the potential for overexposure exists, e.g., when the product is sprayed, aerosolized or heated. Monitoring of airborne isocyanates in the breathing zone of individuals should become part of the overall employee exposure characterization program. Sampling and analytical methods have been developed by NIOSH, OSHA, and others.

MEDICAL SURVEILLANCE.....: Medical supervision of all employees who handle or come in contact with isocyanates is recommended. These should include pre-employment and periodic medical examinations with pulmonary function tests (FEV, FVC as a minimum). History of adult asthma, respiratory allergies such as hay fever, eczema, history of prior isocyanate sensitization, or lack of smell (anosmia) are possible reasons for medical exclusion from isocyanate areas. Once a person is accurately diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

ADDITIONAL PROTECTIVE MEASURES: Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions. For additional information, contact Marine Fenders Int'l, Corp. at 310-834-7037.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM.....	Low Viscosity Liquid
COLOR.....	Colorless to slightly yellow
ODOR.....	Slightly pungent
MOLECULAR WEIGHT.....	
BOILING POINT.....	no data
MELTING/FREEZING POINT.....	no data
SOLUBILITY IN WATER.....	Reacts slowly with water to liberate CO ₂ gas
SPECIFIC GRAVITY.....	1.05
BULK DENSITY.....	7.9 #/GAL
% VOLATILE BY WEIGHT.....	27.29%
VAPOR PRESSURE.....	0.0003 mm Hg @ 68°F (20 C) for IPDI
VAPOR DENSITY.....	no data
Viscosity.....	400-800 cps (20 C/68 F)

10. STABILITY AND REACTIVITY:

STABILITY.....: This is a stable material when properly handled and stored.

HAZARDOUS POLYMERIZATION.....: May occur; Contact with moisture, other materials which react with isocyanates, or temperatures above 400°F (204 C), may cause polymerization.

INCOMPATIBILITIES.....: Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.

INSTABILITY CONDITIONS.....: Contamination with water.

DECOMPOSITION PRODUCTS.....: By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

11. TOXICOLOGICAL INFORMATION:

TOXICITY DATA FOR: Isophorone Diisocyanate

ACUTE TOXICITY

ORAL LD50.....: 5490 mg/kg (Rat)

INHALATION LC50.....: 40 mg/m³ (Rat)

Target Organ Effects: Damages the lung.

12. ECOLOGICAL INFORMATION:

No data available.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD.....: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

EMPTY CONTAINER PRECAUTIONS.: Empty containers must be handled with care due to products residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. **DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.** (See Fire Fighting Measures & Stability and Reactivity Sections). Gases may be highly toxic.

14. TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME.....: RESIN COMPOUND
 DOT Hazard Class.....: Not Regulated
 ADR/VLG Hazard Class.....: Not Regulated
 ADN/R/VBG Hazard Class.....: Not Regulated
 IMDG Hazard Class/ ICAO/IATA/RID/VSG Hazard Class.....: Not Regulated

15. REGULATORY INFORMATION:

OSHA STATUS.....: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS.....: On TSCA Inventory

SARA TITLE III:**SECTION 302 EXTREMELY**

HAZARDOUS SUBSTANCES...: None

SECTION 311 / 312

HAZARD CATEGORIES.....: Immediate Health Hazard; Delayed Health Hazard, Reactive

SECTION 313

TOXIC CHEMICALS.....: Isophorone Diisocyanate/CAS# 4098-71-9
 Reporting Threshold: 1.0 %

The following chemicals are specifically listed by individual states; 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.

COMPONENT NAME	CAS NUMBER	STATE CODE
Isophorone Diisocyanate (IPDI)	4098-71-9	PA1, PA4, MA,
Urethane Bioxazolidine	NJTSRN (31765300002)-11530	PA3, NJ4
Unknown Polymeric Cpds	Unknown	PA3, NJ4
2,2,4 Trimethylpentane	540-84-1	PA1, MA, NJ1, NJ3

FL = Florida Substance List
 IL = Illinois Toxic Substances List
 MA = Massachusetts Hazardous Substance List
 NJ1 = New Jersey Hazardous Substance List
 NJ2 = New Jersey Environmental Hazardous Substance List
 NJ4 = New Jersey Other – include in 5 predominant ingredients > 1%
 PA1 = Pennsylvania Hazardous Substance List
 PA3 = Pennsylvania Non-hazardous present at 3% or greater
 PA4 = Pennsylvania Environmental Hazardous Substance List
 RI = Rhode Island List of Designated Substances
 CN2 = Canada WHMIS Ingredient Disclosure List over 0.1%

REGULATION	COMPONENT	TPQ	RQ
SARA TPQ	Isophorone diisocyanate/ CAS# 4098-71-9	45.4 Kg/100lbs	
EPA/DPT RQ	Isophorone diisocyanate/ CAS# 4098-71-9		45.4Kg/100lbs.

CALIFORNIA PROPOSITION 65

To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

16. OTHER INFORMATION:

NFPA 704M RATINGS:	Health	Flammability	Reactivity	Other
	1*	1	1	
	0 = Insignificant	1 = Slight	2 = Moderate	3 = High 4 = Extreme

HMIS RATINGS:	Health	Flammability	Reactivity
	1*		
	0 = Minimal	1 = Slight	2 = Moderate 3 = Serious 4 = Severe
	* = Chronic Health Hazard		

Marine Fenders Int'l. Inc. method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by MFI Inc. as a customer service.

REASON FOR ISSUE.....:

Prepared By :
 Approved By : J. Thermos
 Approval Date : February 20, 2011
 Supersedes Date :

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