

SAFETY DATA SHEET



Date Prepared : 3/13/2015
 MSDS No : 243

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: Duropoxi F ("Flexible"), Part A, Epoxy

MANUFACTURER

Bonstone Materials Corporation
 707 Swan Drive
 Mukwonago, WI 53149
Emergency Contact: Mike Beckmann
Emergency Phone: 262-363-9877
E-Mail: info@bonstone.com

24 HR. EMERGENCY TELEPHONE NUMBERS

Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Oral), Category 4
 Skin Corrosion, Category 1B
 Serious Eye Damage, Category 1
 Reproductive Toxicity, Category 2
 Skin Sensitization, Category 1

Environmental:

Acute Hazards to the Aquatic Environment, Category 1

GHS LABEL



Environment



Corrosion



Exclamation
 mark



Health
 hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H312: Harmful in contact with skin.
 H317: May cause an allergic skin reaction.
 H314: Causes severe skin burns and eye damage.
 H303: May be harmful if swallowed.
 H361: Suspected of damaging fertility or the unborn child [state specific effect if known] [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard].
 H400: Very toxic to aquatic life.

H412: Harmful to aquatic life with long lasting effects.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

PRECAUTIONARY STATEMENTS

Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P321: Specific treatment (see ... on this label).

P362: Take off contaminated clothing and wash before reuse.

P333+P313: If skin irritation or rash occurs: Get medical advice/attention.

P391: Collect spillage.

P310: Immediately call a POISON CENTER or doctor/physician.

P337+P313: If eye irritation persists: Get medical advice/attention.

P370+P378: In case of fire: Use CO₂, powder, or water spray for extinction.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P403+P235: Store in a well-ventilated place. Keep cool.

Disposal:

P501: Dispose of contents/container in accordance with all local/regional/national/international regulations.

POTENTIAL HEALTH EFFECTS

EYES: Moderately irritating to the eyes.

SKIN: Causes skin irritation. Allergic reactions are possible.

SKIN ABSORPTION: May be absorbed through the skin in harmful amounts.

INGESTION: This material may be harmful or fatal if swallowed.

INHALATION: Harmful if inhaled.

SENSITIZATION: May cause skin sensitization, an allergic reaction which becomes evident on exposure to this material.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Bisphenol A/epichlorohydrin Resin	Trade secret	25068-38-6
Calcium Carbonate	Trade secret	471-34-1
Nonylphenol	Trade secret	25154-52-3
2,2,4-trimethyl-1,3-pentanediol Monoisobutyrate	Trade secret	25265-77-4
Rheological additive	Trade secret	

4. FIRST AID MEASURES

EYES: Flush eye with water for 15 minutes. Get medical attention.

SKIN: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

FIRE FIGHTING PROCEDURES: Use alcohol foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

FIRE FIGHTING EQUIPMENT: Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: Absorb the liquid and scrub the area with detergent and water.

RELEASE NOTES: Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

SPECIAL PROTECTIVE EQUIPMENT: Remove contaminated clothing and wash before reuse.

COMMENTS: If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid contact with eyes, skin, and clothing.

HANDLING: Wash hands before eating and wash before reuse.

STORAGE: Store in a tightly closed container.

COMMENTS: Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³
Calcium Carbonate	TWA	15		10	

ENGINEERING CONTROLS: Use only in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: Wash thoroughly after handling.

RESPIRATORY: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements

must be followed whenever workplace conditions warrant a respirator's use.

WORK HYGIENIC PRACTICES: Provide readily accessible eyewash stations and safety showers. Wash at the end of each work shift and before eating, smoking, or using the toilet.

OTHER USE PRECAUTIONS: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

COMMENTS: Avoid breathing any (dust, vapor, mist, gas) that may be generated when grinding cured material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Boiling Point (°C)	Freezing Point (°C)	Auto Ignition (°C)	Solubility in Water	Specific Gravity
Bisphenol A/epichlorohydrin Resin	480				Negligible	1.17
Calcium Carbonate					Negligible	2.71
2,2,4-trimethyl-1,3-pentanediol Monoisobutyrate	248	260	-50	393	Slightly soluble (less than 5%)	0.95

PHYSICAL STATE: Semisolid

APPEARANCE: Grayish, semi-solid, near-gel material

PERCENT VOLATILE: 0

FLAMMABLE LIMITS: 0 to 0

BOILING POINT: to (500°F)

SOLUBILITY IN WATER: Negligible

SPECIFIC GRAVITY: 1.623

(VOC): = 0 (no VOC's)

COMMENTS: Not yet Known

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: Stable.

CONDITIONS TO AVOID: Can react vigorously with strong oxidizing agents, strong Lewis or mineral acids, and strong mineral and organic bases---especially primary and secondary aliphatic amines. Reaction with some curing agents may produce considerable heat. Runaway cure actions may char and decompose the resin system, generating unidentified fumes and vapors which may be toxic.

HAZARDOUS DECOMPOSITION PRODUCTS: The byproducts expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Bisphenol A/epichlorohydrin Resin	11.4 g/kg (rat)	> 20 ml/kg (rabbit)	
2,2,4-trimethyl-1,3-pentanediol Monoisobutyrate	6517 mg/kg (rat)	> 15200 mg/kg (rabbit)	> 3.55 mg/l (rat)

COMMENTS: Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects. Results of immunogenicity tests in animals have been negative. Has been shown to be negative in some in- vitro immunogenicity tests and positive in others.

12. ECOLOGICAL INFORMATION

COMMENTS: No information.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements be be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

OTHER SHIPPING INFORMATION: Not regulated by DOT

COMMENTS: Not regulated by DOT

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

313 REPORTABLE INGREDIENTS: Not considered a SARA 313 "Toxic Chemical".

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Bisphenol A/epichlorohydrin Resin	25068-38-6

TSCA STATUS: All ingredients in this mixture are in compliance with TSCA.

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This product and/or all of it's components is/are listed on the TSCA Inventory.

16. OTHER INFORMATION

REASON FOR ISSUE: New MSDS format

APPROVED BY: Mike Beckmann **TITLE:** President

Date Prepared: 3/13/2015

INFORMATION CONTACT: Mike Beckmann

MANUFACTURER DISCLAIMER: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or any process, unless specified in the text.

SAFETY DATA SHEET



Date Prepared : 05/05/2015

MSDS No : 248

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: Duropoxy F, Part B, Curing Agent

MANUFACTURER

Bonstone Materials Corporation
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24 HR. EMERGENCY TELEPHONE NUMBERS

Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Corrosion, Category 1B
 Skin Irritation, Category 1B
 Serious Eye Damage, Category 1
 Eye Irritation, Category 1
 Skin Sensitization, Category 1B
 Reproductive Toxicity, Category 2
 Acute Toxicity (Oral), Category 4
 Acute Toxicity (Inhalation), Category 4
 Acute Toxicity (Dermal), Category 4

Environmental:

Acute Hazards to the Aquatic Environment, Category 1
 Chronic Hazards to the Aquatic Environment, Category 3

GHS LABEL



Corrosion



Environment

Health
hazardExclamation
mark

HAZARD STATEMENTS

H314: Causes severe skin burns and eye damage.
 H317: May cause an allergic skin reaction.
 H302: Harmful if swallowed.
 H361: Suspected of damaging fertility or the unborn child (state specific effect if known)(state route of exposure

if it is conclusively proven that no other routes of exposure cause the hazard).

H400: Very toxic to aquatic life.

H412: Harmful to aquatic life with long lasting effects.

H315: Causes skin irritation.

H302 + H312: Harmful if swallowed or in contact with skin.

H332: Harmful if inhaled.

PRECAUTIONARY STATEMENTS

Prevention:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P264: Wash hands thoroughly after handling.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P310: Immediately call a POISON CENTER/doctor/...

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P362+P364: Take off contaminated clothing and wash it before reuse.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents/container in accordance with all local/regional/national/international regulations.

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Inhalation and skin contact are expected to be the primary routes of occupational exposure to benzyl alcohol. Vapors may cause respiratory tract irritation and a burning sensation. High vapor concentrations, ingestion and skin absorption may cause headache, sore throat, coughing, difficulty breathing, low blood pressure, fatigue, nausea, vomiting, diarrhea and abdominal pain. Severe cases may result in respiratory and muscular paralysis, convulsions, narcosis and death. Direct contact with liquid may cause eye and skin irritation, allergic skin reaction and anesthetic (numbing) effects.

Mild to severe lung injury can occur if benzyl alcohol is drawn into lungs after swallowing or vomiting after swallowing.

POTENTIAL HEALTH EFFECTS

EYES: Severely irritating. If not removed promptly, will injure eye tissue, which may result in permanent damage.

SKIN: Severely irritating to the skin.

SKIN ABSORPTION: May be fatal if absorbed through skin.

INGESTION: This material may be harmful or fatal if swallowed.

INHALATION: Prolonged or repeated inhalation may cause lung damage and/or central nervous system disturbances.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
2-piperazin-1-ylethylamine	Trade secret	140-31-8
Polyoxypropylenediamine	Trade secret	9046-10-0
3,6-diazaoctanethylenediamine	Trade secret	112-24-3
Benzyl Alcohol	Trade secret	100-51-6
Nonylphenol	Trade secret	25154-52-3
Calcium Carbonate	Trade secret	471-34-1
4,4'-isopropylidenediphenol	Trade secret	80-05-7

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Thoroughly wash or discard clothing and shoes before reuse.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

EXPLOSION HAZARDS: None known. Treat as combustible.

FIRE FIGHTING PROCEDURES: Use alcohol foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

FIRE EXPLOSION: None known. Treat as combustible.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including ignitable vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth and gravel, etc. as necessary and place in closed containers for disposal.

GENERAL PROCEDURES: Contain spill with dike to prevent entry into sewers.

RELEASE NOTES: Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

SPECIAL PROTECTIVE EQUIPMENT: Remove contaminated clothing and wash before reuse.

COMMENTS: If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Use with adequate ventilation.

HANDLING: Wash hands before eating and wash before reuse.

STORAGE: Store in a tightly closed container.

COMMENTS: Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Benzyl Alcohol	TWA					10 ppm [1]	[1]
Calcium Carbonate	TWA	15		10			

Footnotes:
1. WEEL (US Workplace Environmental Exposure Levels)

ENGINEERING CONTROLS: Use only in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: Wash thoroughly after handling.

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

WORK HYGIENIC PRACTICES: Provide readily accessible eyewash stations and safety showers. Wash at the end of each work shift and before eating, smoking, or using the toilet.

OTHER USE PRECAUTIONS: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

COMMENTS: Avoid breathing any (dust, vapor, mist, gas) that may be generated when grinding cured material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Solubility in Water	Specific Gravity
2-piperazin-1-ylethylamine		Soluble	0.987
Polyoxypropylenediamine	250		0.948
3,6-diazaoctanethylenediamine	200		1.02
Benzyl Alcohol	220	Slightly soluble (less than 5%)	1.04
Calcium Carbonate		Negligible	2.71

PHYSICAL STATE: Semisolid

ODOR: Amine

APPEARANCE: Grayish, semi-solid, near-gel material

PERCENT VOLATILE: 0

FLASHPOINT AND METHOD: >

FLAMMABLE LIMITS: 0 to 0

BOILING POINT: to (500°F)

SOLUBILITY IN WATER: Moderate

(VOC): = 0 (no VOC's)

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: Stable.

CONDITIONS TO AVOID: Extreme heat, exposure to active metal alloys and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitrogen oxides, carbon dioxide, and carbon monoxide.

INCOMPATIBLE MATERIALS: Epoxy resins under uncontrolled conditions.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
2-piperazin-1-ylethylamine	≥ 2150 mg/kg (rat)	≥ 866.8 mg/kg (rabbit)	
Polyoxypropylenediamine	2.88 g/kg (rat)	2980 mg/kg (rabbit)	
3,6-diazaoctanethylenediamine	> 1000 mg/kg	> 1000 mg/kg	
Benzyl Alcohol	1230 to 3100 (rat)	2000 mg/kg (rabbit)	1000 ppm (rat)

EYE EFFECTS: May cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Vapors may irritate eyes.

SKIN EFFECTS: May cause severe injury to skin following prolonged or repeated contact, and may cause skin sensitization or other allergic responses.

12. ECOLOGICAL INFORMATION

COMMENTS: No information.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements be be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

COMMENTS: Not regulated by DOT

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**311/312 HAZARD CATEGORIES:** Immediate health hazard, delayed health hazard.**EPCRA SECTION 313 SUPPLIER NOTIFICATION**

Chemical Name	Wt. %	CAS
4,4'-isopropylidenediphenol	Trade secret	80-05-7

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
2-piperazin-1-ylethylamine	140-31-8
Polyoxypropylenediamine	9046-10-0
Benzyl Alcohol	100-51-6

TSCA STATUS: This product and/or all of it's components is/are listed on the TSCA Inventory.**STATES WITH SPECIAL REQUIREMENTS**

Chemical Name	Requirements
Benzyl Alcohol	This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List: Benzyl Alcohol This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List: Benzyl Alcohol

16. OTHER INFORMATION**REASON FOR ISSUE:** New formula**APPROVED BY:** Mike Beckmann **TITLE:** President**Date Prepared:** 05/05/2015**INFORMATION CONTACT:** Mike Beckmann**MANUFACTURER DISCLAIMER:** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or any process, unless specified in the text.