

SAFETY DATA SHEET



Date Prepared : 7/15/2013
MSDS No : MB100BGHS
Date Revised : 10/29/2014
Revision No : 1

Barco Bond MB-100B

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Barco Bond MB-100B
GENERAL USE: Adhesive System
PRODUCT CODE: Filled Epoxy Catalyst: Part 2 of 2
ALTERNATE TRADE NAME(S): Specification A50A251A

MANUFACTURER

Astro Chemical Company, Inc.
 www.astrochemical.com
 PO Box 1250, 3 Mill Road Extension
 Ballston Lake, NY 12019
Product Stewardship: 518-399-5338
E-Mail: sales@astrochemical.com

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (US Transportation) : (800) 424 - 9300

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Oral), Category 4
 Acute Toxicity (Dermal), Category 4
 Skin Corrosion, Category 1B
 Eye Corrosion, Category 1
 Carcinogenicity, Category 1A
 Target Organ Toxicity (Single exposure), Category 3

GHS LABEL



Corrosion



Health
hazard

SIGNAL WORD: DANGER

HAZARD STATEMENTS

H314: Causes severe skin burns and eye damage.
 H302: Harmful if swallowed.
 H350: May cause cancer .
 H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENT(S)

Prevention:

P233: Keep container tightly closed.
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264: Wash ... thoroughly after handling.

Storage:

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P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Disposal:

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

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Paste

IMMEDIATE CONCERNS: Corrosive. Keep away from heat and sources of ignition. Combustible liquid. Severe eye irritant. Severe respiratory irritant. Severe skin irritant. May cause sensitization by inhalation. May cause sensitization by skin contact. Harmful if swallowed. Harmful in contact with skin.

POTENTIAL HEALTH EFFECTS

EYES: Corrosive, contact causes severe eye burns.

SKIN: Contact causes severe skin irritation and possible burns.

INGESTION: If ingested, severe burns of the mouth and throat, as well as danger of perforation of the oesophagus and the stomach. Harmful if swallowed.

INHALATION: Harmful if inhaled and may cause delayed lung injury. Can cause severe eye, skin and respiratory tract burns. Risk of serious damage to the lungs (by inhalation). May cause nose, throat, and lung irritation.

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

CARCINOGENICITY: Refer to Section 11 for additional details regarding this statement.

MUTAGENICITY: Not Available

MEDICAL CONDITIONS AGGRAVATED: Eye disease. Skin disorders. Allergies. Asthma. Kidney disorders. Liver disorders.

TARGET ORGAN STATEMENT: Skin. Eyes. Respiratory system. Liver. Kidney. Pancreas. Spleen.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Amine-Epoxy resin Adduct	30 - 60	Trade Secret
Silica, Crystalline	40 - 70	14808-60-7
2,2'-iminodiethylamine	< 15	111-40-0
Phenol	< 1	108-95-2

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4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain gentle and continuous irrigation until the patient receives medical care.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Move exposed person to fresh air. Keep person warm and at rest. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe.

NOTES TO PHYSICIAN: Application of corticosteroid cream has been effective in treating skin irritation.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Alcohol-resistant foam. Carbon dioxide (CO₂). Dry chemical. Dry sand. Limestone powder.

HAZARDOUS COMBUSTION PRODUCTS: Incomplete combustion may form carbon monoxide. May generate ammonia gas. May generate toxic nitrogen oxide gases. Burning produces noxious and toxic fumes.

EXPLOSION HAZARDS: Fire or intense heat may cause violent rupture of packages. May form explosive mixtures in air.

FIRE FIGHTING EQUIPMENT: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Avoid runoff into storm sewers and ditches which lead to waterways.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

GENERAL PROCEDURES: Absorb with inert absorbent materials such as: Dry sand. Vermiculite. Activated charcoal. Place in appropriate chemical waste container.

7. HANDLING AND STORAGE

HANDLING: Put on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Empty containers retain product residue and can be hazardous. Do not reuse container. Refer to Section 8 for additional information.

STORAGE: Do not store near acids. Keep away from Oxidizers. Keep containers tightly closed in dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

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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
Amine-Epoxy resin Adduct	TWA	Not Established	Not Established	Not Established	Not Established	Not Available	Not Available
Silica, Crystalline	TWA	Not Available	(0.1)	Not Available	.025	Not Available	Not Available
2,2'-iminodiethylamine	TWA	1 [1]	4 [1]	1 [1]	Not Available [1]	Not Available	Not Available
Phenol	TWA	S 5	19	S 5	19	Not Available	Not Available
	STEL	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Footnotes:							
1. Skin							

ENGINEERING CONTROLS: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapors or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep workers exposure to airborne contaminants below any recommended or statutory limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

SKIN: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

RESPIRATORY: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

WORK HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Ensure that eyewash stations and safety showers are close to the workstation.

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9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Paste

ODOR: Irritating

ODOR THRESHOLD: Not Available

APPEARANCE: Paste

COLOR: Tan

PHYSICAL STATE COMMENTS: Semi-solid paste

pH: Alkaline

PERCENT VOLATILE: Not Available

FLASH POINT AND METHOD: ~ 75.56°C (167°F) Pensky-Martens Closed Cup

FLAMMABLE LIMITS: Not Available

AUTOIGNITION TEMPERATURE: Not Available

VAPOR PRESSURE: < 20.68 mmHg at 21°C

VAPOR DENSITY: Not Available

BOILING POINT: > 200°C (392°F)

FREEZING POINT: Not Available

MELTING POINT: Not Available

THERMAL DECOMPOSITION: Not Available

SOLUBILITY IN WATER: Slight

EVAPORATION RATE: Not Available

SPECIFIC GRAVITY: ~ 2.08

COEFF. OIL/WATER: Not Available

OXIDIZING PROPERTIES: Not Available

10. STABILITY AND REACTIVITY

REACTIVITY: Yes

HAZARDOUS POLYMERIZATION: Product will not undergo hazardous polymerization.

STABILITY: This product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

CONDITIONS TO AVOID: Keep away from heat, flame and sparks.

HAZARDOUS DECOMPOSITION PRODUCTS: Nitric acid. Ammonia. Nitrogen oxides (NO_x). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO₂). Aldehydes. Flammable hydrocarbon fragments. Nitrosamine. Chlorine.

INCOMPATIBLE MATERIALS: Reactive metal. Materials reactive with hydroxyl compounds. Nitrous acid and other nitrosating agents. Organic acids. Mineral acids. Sodium hypochlorite. Oxidizing agent. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

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11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Amine-Epoxy resin Adduct	No data Available	No Data Available	No Data Available.
2,2'-iminodiethylamine	1080 mg/kg RAT	1090 mg/Kg Rabbit	~ 0.07 to 0.3 mg/l / 4hr / RAT
Phenol	> 1457 mg/kg RAT	> 1090 mg/Kg Rabbit	16000 ppm RAT (4h)

EYE EFFECTS: Severe eye irritation.

SKIN EFFECTS: Severe skin irritation.

CHRONIC: Not Available

CARCINOGENICITY

Chemical Name	NTP Status	IARC Status	OSHA Status
Amine-Epoxy resin Adduct	Not Listed	Not Classified	Not Regulated
Silica, Crystalline	known human carcinogen	Carcinogenic to humans (Group 1)	Not Regulated
2,2'-iminodiethylamine	Not Listed	Not Classified	Not Regulated
Phenol	Not Listed	Not Classified	Not Regulated

Notes: This product contains silica. The International Agency for Research on Cancer (IARC) concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "sufficient evidence in experimental animals for the carcinogenicity of quartz and cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group I)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.

REPEATED DOSE EFFECTS: Not Available

IRRITATION: Not Available

CORROSIVITY: Not Available

SENSITIZATION: Not Available

NEUROTOXICITY: Not Available

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GENETIC EFFECTS: Not Available

REPRODUCTIVE EFFECTS: Not Available

TARGET ORGANS: Not Available

TERATOGENIC EFFECTS: Not Available

MUTAGENICITY: The product or a component may be mutagenic, the data is inconclusive.

SYNERGISTIC MATERIALS: Not Available

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Not Available

ECOTOXICOLOGICAL INFORMATION: Not Available

BIOACCUMULATION/ACCUMULATION: Not Available

AQUATIC TOXICITY (ACUTE)

48-HOUR EC₅₀: 5.55 mg/l

Notes: Toxicity to daphnia - component: Phenol

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

PRODUCT DISPOSAL: Disposal must be in compliance with all local and national laws and regulations.

EMPTY CONTAINER: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Amines, liquid, corrosive, n.o.s.

TECHNICAL NAME: (Diethylenetriamine(DETA) Mixture)

PRIMARY HAZARD CLASS/DIVISION: 8

UN/NA NUMBER: 2735

PACKING GROUP: III

AIR (ICAO/IATA)

SHIPPING NAME: Amines, liquid, corrosive, n.o.s.

TECHNICAL NAME: (Diethylenetriamine(DETA) Mixture)

UN/NA NUMBER: 2735

PRIMARY HAZARD CLASS/DIVISION: 8

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15. REGULATORY INFORMATION

UNITED STATES

DOT LABEL SYMBOL AND HAZARD CLASSIFICATION



Corrosive

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

FIRE: No **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes **CHRONIC:** Yes

313 REPORTABLE INGREDIENTS: Not Available

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Not Available

EPA

EPA RQ INGREDIENT: Not Available

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All ingredients in this material are on the TSCA Inventory.

TSCA STATUS: All components are listed or exempted.

CALIFORNIA PROPOSITION 65: This product contains a chemical known in the State of California to cause cancer.

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



Corrosive

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

WHMIS CLASS: Combustible liquid, Toxic Material Causing Other Toxic Effects, Corrosive Material.

DOMESTIC SUBSTANCE LIST (INVENTORY): The ingredients of this product are listed on the Domestic Substance List, Non-Domestic Substance List or are exempt.

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16. OTHER INFORMATION

APPROVED BY: MSDS Department

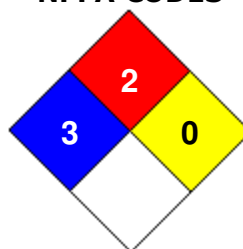
PREPARED BY: MSDS Department **Date Revised:** 10/29/2014

REVISION SUMMARY: This MSDS replaces the 7/22/2013 MSDS. Revised: **Section 2:** CARCINOGENICITY, MUTAGENICITY, REPRODUCTIVE EFFECTS, TERATOGENIC EFFECTS. **Section 3:** . **Section 9:** FLAMMABLE LIMITS, MELTING POINT, OXIDIZING PROPERTIES, PERCENT VOLATILE, THERMAL DECOMPOSITION. **Section 11:** CHRONIC, NEUROTOXICITY, REPRODUCTIVE EFFECTS, SENSITIZATION, SYNERGISTIC MATERIALS, TARGET ORGANS, TERATOGENIC EFFECTS, IRRITATION, CORROSIVITY, GENETIC EFFECTS, REPEATED DOSE EFFECTS. **Section 13:** EMPTY CONTAINER, PRODUCT DISPOSAL. **Section 15:** CERCLA REGULATORY, EPA RQ INGREDIENT, 313 REPORTABLE INGREDIENTS. **Section 16:** ADDITIONAL MSDS INFORMATION.

HMIS RATING

HEALTH	<input type="text"/>	3
FLAMMABILITY	<input type="text"/>	2
PHYSICAL HAZARD	<input type="text"/>	0
PERSONAL PROTECTION	<input type="text"/>	

NFPA CODES



MANUFACTURER SUPPLEMENTAL NOTES: Information Phone Number: (518) 399-5338

ADDITIONAL MSDS INFORMATION: Safety Data Sheet prepared in accordance with UNECE Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Fourth revised edition.

MANUFACTURER DISCLAIMER: The information provided herein was believed by Astro Chemical Company, INC. to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of this product and to determine the suitability of the product for its intended use.