AngstromBond®

Adhesives

Advanced Polymers for High Tech Applications

Safety Data Sheet

Section 1: Identification of the substance or mixture and of the supplier

Product Name: **AB 9112**
Intended Use: **Adhesive, Encapsulating, Binding**

For product emergencies involving spill, leak, fire exposure or accident please contact Chemtrec at 1 -800- 424-9300 For all other inquires please contact Fiber Optic Center, Inc TM at 1 -800- 473-4237

Section 2: Hazard(s) Identification

Symbol (s) **Signal word: Danger**

Classification of the Substance or mixture:

Part B:

Hazard statements:	**4, H302 + H312**	**Harmful if swallowed or in contact with skin.**
	1B, H314	**Causes severe skin burns and eye damage, Skin corrosion**
	1, H317	**May cause an allergic skin reaction**
	2, H330	**Fatal if inhaled; Acute toxicity**

Corrosive: C, R34; Sensitizing: Xi, R43; Harmful: Xn, R21/22; Very toxic: T+R26; Irritant: Xi, R37

Precautionary statements: **Prevention:**

P260	**Avoid breathing dust/fume/gas/mist/vapors/spray**
P273	**Avoid release to the environment**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

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Fiber Optic Center™, Inc., 23 Centre Street, New Bedford, MA, 02740-6322, USA E-mail: sales@focenter.com
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Section 3: Composition / Information on Ingredients

Ingredients	%	Cas#
Part A:		
Bisphenol epoxy resin	40-70	25068-38-6
Modifier	25-40	T.S. (Trade secret)
Part B:		
Polyalkylamine	20-50	112-57-2
Polyamine	10-40	27308-78-7
Filler	20-40	21645-51-2
Accelerator	1-10	Privileged

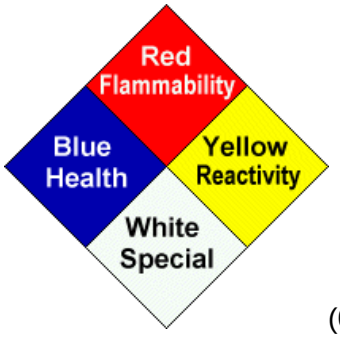
Section 4: First Aid Measures

Eyes: Immediately wash with water for 20 minutes, call a Physician.
Skin: Promptly wash with soap & water
Inhalation: Remove to the fresh air. Give oxygen if required.

Oral: If conscious, give a large quantities of water or milk, induce vomiting. Call a Physician.

Comments: Promptly remove contaminated clothing, wash before reuse. Destroy contaminated leather and absorbent shoes.

Section 5: Fire-Fighting Measures



(0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

Part A: Health: 1 Flammability: 0 Reactivity: 0

Part B: Health: 2 Flammability: 0 Reactivity: 0 Corrosive

Extinguishing Media: Use carbon dioxide, dry chemicals, foam, water fog.

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Flash Point (degree F): > 350ºC (PM Closed Cup)
Flammability limits in air (LFL): ND (UFL): ND
Unusual Fire or Explosion Hazard: Decomposition & combustion products may be toxic
Special Fire Fighting Procedures: Use self-contained breathing apparatus
Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

Section 6: Small and Leak Procedures

For small spills: Wipe up, or absorb with vermiculite or other absorbent material. Collect waste in sealed containers. Scrub area with soapy water and rinse. Prevents rinses from entering drains or other waterways. Spilled material and water rinses are classified as chemical waste, and must be disposed of according to current local, state, and federal regulations.

For large spills: Dike area to contain spilled material and to runoff into drains, sewers, and other waterways. Shovel or pump to drum or salvage tank. Absorbed residual material with sand, vermiculite, or other absorbent material. Scrape or shovel absorbed waste and absorbent into containers. Scrub area with soapy water and rinse. Prevents rinse from entering drains or other waterways.

Section 7: Handling and Storage

Protective Equipment: Eyes: Wear splash proof goggles.
Protective clothing: Skin: Wear impervious gloves. Wear appropriate equipment to prevent skin contact.
Inhalation: Use NIOSH approved respirator suitable for organic vapors, if required.
Ventilation: Local Exhaust: Required
Mechanical (General): Required

Suitable Respirator: NIOSH approved respirator suitable for organic vapors. These precautions are for room temperature handling, use at elevated temperature may require added precautions.

Section 8: Exposure Controls / Personal Protection

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

Skin/Hand Protection: Wear thermal insulating gloves and face shield or eye protection when working with materials that present thermal hazards (hot or cold).

Respiratory Protection: A NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used in situations of oxygen

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deficiency (oxygen content less than 19.5 percent), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

Section 9: Physical and Chemical Properties

Part A:

Boiling Point @ 760 mm Hg: N/A
Specific Gravity @ 25º C: 1.12 - 1.20 mixed
Melting Point: N/A
Vapor Pressure @ 25º C, MM Hg: < 1
Vapor Density @ 25º C (air=1): Heavier than air
Percent volatile by volume: 0
Evaporation rate (Butyl acetate = 1): N/E
Solubility in Water: Negligible

Health 1
Flammability 0
Reactivity 0

Part B:

Boiling Point @ 760 mm Hg: N/E
Specific Gravity @ 25º C: 1.12-1.20 mixed
Melting Point: N/A
Vapor Pressure @ 25º C, MM Hg: < 1 @ 20º C
Vapor Density @ 25º C (air=1): Heavier than air
Percent volatile by volume: Negligible
Evaporation rate (Butyl acetate = 1): N/D
Solubility in Water: Mixes completely
Appearance and Odor: Clear colorless liquid, ammonia odor
Note: The above information is not intended for use in preparing product specifications.

Health 2
Flammability 0
Reactivity 0
Spec. Hazard COR

Section 10: Stability and Reactivity

Part A:
Stability: Stable
Incompatibilities: Strong oxidizers, amines, amides, strong Lewis or mineral acids, thiosulfates, carboxylic acids, alcohol, mercaptans. Reaction with curing agents is exothermic; Smoke or fumes may be evolved if heat of reaction becomes excessive due to high curing temperature or curing of large masses of material.

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Condition to Avoid: Storage in open containers, expose to heat and/or open flame, uncontrolled mixing with (or exposure to) incompatible substances (above)
Hazardous Polymerization: Will not occur
Hazardous decomposition Materials: carbon monoxide and carbon dioxide
Part B:
Stability: Stable
Incompatibilities: Strong oxidizers, acids, epoxies, aldehydes, ketones, acrylates and organic halides.
Condition to Avoid: Storage in open containers, expose to heat and/or open flame, uncontrolled mixing with (or exposure to) incompatible substances (above)
Hazardous Polymerization: Will not occur
Hazardous decomposition Materials: carbon monoxide, carbon dioxide, oxides of nitrogen and other organic substances may be formed during combustion. The chemical nature and quantity of decomposition by-product will vary widely depending on the conditions of combustion

Section 11: Toxological Information

Part A:
Oral LD 50: N/D Dermal LD 50: N/D
TLV: NONE Established
Irritation-Skin: Prolonged exposure is not likely to result significant skin irritation. Repeated contact may cause skin irritation.
Irritation-Eyes: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.
Sensitization: Moderate sensitization
Respiratory: None likely unless heated to high temperatures
Effects of Exposure: Irritation, Sensitization, and Dermatitis

Part B:
Oral LD 50: 4.3 g/kg (rats) Dermal LD 50: 2.5 g/kg (rabbits)
TLV: NONE Established

Skin Contact: May cause severe skin burns and allergic reaction.
Eye Contact: Contains materials severe irritation to the eyes. Symptoms may include result in permanent impairment of vision, even blindness.
Inhalation: May cause respiratory sensitization of asthma in susceptible individual.
Ingestion: May cause gastrointestinal irritation or ulceration. May cause burns of the mouth and throat.
Sensitization: Corrosive

Section 12: Ecological Information

Toxicity: No data available

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available. Mobility in soil: No data available

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Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13: Disposal Considerations

A small amount of leftover Part A and B as a liquid form could be cured to a solid mass by mixing according to the recommended ratio and then can be disposed as a waste. Uncured liquid material should not be disposed as a regular waste. Surplus and non-recyclable solutions get help from a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

Section 14: Transport Information

Part A: This material is not subject to DOT regulations under 49 CFR Parts 17-180

Part B: Corrosive, Amines, Liquid, N.O.S. (Diethyltetramine), Class 8, UN2079, Packing Group II

Section 15: Regulatory Information

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute Health:	Yes
Chronic Health:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

CERCLA/SARA - Section 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:

California Proposition 65:

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

WHMIS Statement: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

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National Chemical Inventories

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA
All components are either on the DSL, or are exempt from DSL listing requirements

Section 16: Other Information

Training advice.

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

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