AngstromBond® Adhesives

Advanced Polymers for High Tech Applications

SDS # AB 9320 Part A

Safety Data Sheet

according to OSHA HCS

SDS #: AB 9320 Part A

Issue Date: 6/3/2015 **Revision Date: 7/30/2015**

Section 1: Identification

GHS Product Identifier/Name AngstromBond® AB 9320 Part A

Other means of identification
Product Code AB 9320
Other means of identification AB 9320 Part A

Recommended use of the chemical and restrictions on use
Identified Uses Epoxy Resin

Details of the supplier of the Safety Data Sheet
Supplier Address

Fiber Optic Center, Inc.
23 Centre Street
New Bedford, MA 02740-6322 USA
Tel: 1-508-992-6464
Fax: 1-508-991-8876

Emergency Telephone CHEMTREC 1-800-424-9300 (24 hrs)
For product emergencies involving spill, leak, fire exposure or accident please contact CHEMTREC.
For all other inquires please contact Fiber Optic Center, Inc.TM at 1-800-473-4237

Section 2: Hazard(s) Identification

Classification of the Substance or mixture:

Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.

GHS Label Elements:

This product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard Pictograms:

GHS07

Section 2: Hazard(s) Identification Continued

Signal word: **WARNING**

Hazard determining components of labeling:
reactive diluent (epoxy functional)
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)

Hazard Statements:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements – Prevention:
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 Wear protective gloves.
P280 Wear eye protection / face protection.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P363 Wash contaminated clothing before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P330 Rinse mouth.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification System:

NFPA ratings (scale 0-4) -
Health = 2 / Fire = 1 / Reactivity = 0

HMIS ratings (scale 0-4) –
Health = 2 / Fire = 1 / Reactivity =0

Other Hazards:
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

Section 3: Composition / Information on Ingredients

Description: Mixture of the substances listed below with non-hazardous additions. Non-hazardous ingredients are not listed.

Components:

Diglycidyl Ether Bisphenol-A epoxy resin:
Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317

Reactive diluent:
Acute Tox. 3, H301; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335

SVHC (Substances of Very High Concern - REACH):
None of the ingredients is listed.

Additional information: For the wording of the listed risk phrases refer to section 16. This resin is a blended mixture of liquid resins and mineral, ceramic or organic fillers. These fillers do not pose airborne hazards to the user of this formulated product because they are completely encapsulated in the resin mass. If any of the specific fillers are hazardous in accordance with Section 313 of the Emergency Planning and Community Right-to-know Act (EPCRA) they are identified in section 15 of this SDS (SARA Section 313).

Section 4: First-Aid Measures

After inhalation: Supply fresh air. For added safety, call a doctor. In case of unconsciousness place patient in a stable side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

Section 5: Fire-Fighting Measures

Extinguishing media:
Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters:
Protective equipment: No special measures required.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Not required.
Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system.
Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.
Reference to other sections See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

Section 7: Handling and Storage

Handling:
· **Precautions for safe handling:** Store in cool, dry place in tightly closed receptacles. Use only in well ventilated areas.
· **Information about protection against explosions and fires:** No special measures required.

Conditions for safe storage, including any incompatibilities:
Storage:
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Keep receptacle tightly sealed.
· **Specific end use(s):** No further relevant information available.

Section 8: Exposure Controls / Personal Protection

Additional information about design of technical systems: No further data; see item 7.

Control parameters:
· **Components with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the creation were used as basis.

Exposure controls:
Personal protective equipment:
· **General protective and hygienic measures:** Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:** Protective gloves. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation of the material.
· **Material of gloves:** The selection of suitable gloves depends not only on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material:** The exact penetration time has to be determined by the glove manufacturer and has to be observed.

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties:
General Information:
· **Appearance:**
Form: Liquid
Color: Black
· **Odor:** Mild
· **Odour threshold:** Not determined.

pH-value: Not determined.

Change in condition:
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 201 °C

Flash point: 94 °C

Flammability (solid, gaseous): Not applicable.

Ignition temperature:
Decomposition temperature: Not determined.

Auto igniting: Product is not self-igniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
Lower: Not determined.
Upper: Not determined.

Vapor pressure: Not determined.

Density at 20 °C: 1.1 g/cm³
Relative density: Not determined.
Vapour density: Not determined.
Evaporation rate: Not determined.

Solubility in / Miscibility with Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

Solvent content:
Organic solvents: 0.0 %
· **Other information** No further relevant information available.

Section 10: Stability and Reactivity

Reactivity:
Chemical stability-
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions:** Reacts with amines.
· **Conditions to avoid:** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** Irritant gases/vapors

Section 11: Toxicological Information

Information on toxicological effects:
Acute toxicity:
Primary irritant effect:
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** Irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:** The product shows the following dangers according to internally approved calculation methods for preparations: Irritant

Carcinogenic categories:
· **IARC (International Agency for Research on Cancer):** None of the ingredients is listed.
· **NTP (National Toxicology Program):** None of the ingredients is listed.
· **OSHA-Ca (Occupational Safety & Health Administration):** None of the ingredients is listed.

Section 12: Ecological Information

Toxicity:
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.

Behavior in environmental systems:
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.

Ecotoxical effects:
· **Remark:** Toxic for fish

Additional ecological information:
· **General notes:** Water hazard class 2 (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Toxic for aquatic organisms

Results of PBT and vPvB assessment:
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

Section 13: Disposal Considerations

Waste treatment methods:
· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:
· **Recommendation:** Disposal must be made according to official regulations.

Section 14: Transport Information

UN-Number:
· **DOT, ADR, ADN, IMDG, IATA:** Not Applicable

UN proper shipping name:
· **DOT:** Not Regulated
· **ADR, ADN, IMDG, IATA:** Not Applicable

Transport hazard class(es):
· **DOT, ADR, ADN, IMDG, IATA Class:** Not Applicable

Packing group:
· **DOT, ADR, IMDG, IATA:** Not Applicable

Environmental hazards: Product contains environmentally hazardous substances: Diglycidyl ether Bisphenol-A epoxy resin
· **Marine pollutant:** No

Special precautions for user: Not applicable.

Transport in bulk according to Annex I I of MARPOL73/78 and the IBC Code: Not applicable.

UN "Model Regulation": -

Section 15: Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or Mixture:
Sara:
· **Section 302 (extremely hazardous substances):** None of the ingredients is listed.
· **Section 313 (Specific toxic chemical listings):** None of the ingredients is listed by CAS number.
· **Sections 311/312 (Specific hazard chemical listings):** reactive diluent (epoxy functional)
· **Sections 311/312 Hazard Categorizations:**
reactive diluent (epoxy functional) / A = Acute health hazard 20-40%
· **TSCA (Toxic Substances Control Act):** All ingredients are listed.

Proposition 65:
· **Chemicals known to cause cancer:** None of the ingredients is listed.
· **Chemicals known to cause reproductive toxicity for females:** None of the ingredients is listed.
· **Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed.
· **Chemicals known to cause developmental toxicity:** None of the ingredients is listed.

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Section 15: Regulatory Information Continued

Carcinogenic categories:

· **EPA (Environmental Protection Agency):** None of the ingredients is listed.
· **TLV (Threshold Limit Value established by ACGIH):** None of the ingredients is listed.
· **MAK (German Maximum Workplace Concentration):** None of the ingredients is listed.
· **NIOSH-Ca (National Institute for Occupational Safety and Health):** None of the ingredients is listed.

Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

Section 16: Other Information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

H301 Toxic if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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