

Manufacturer:

ÅngströmBond®

Product Name:

ÅngströmBond® AB9088 Plastic Bonding Adhesive, UV Cure (3cc Syringe)

Manufacturer Part Number:

AB9088-3CC

Click here for more details on the AngströmBond® AB9088 Plastic Bonding Adhesive, UV Cure (3cc Syringe)

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Adhesives

AB 9088 from AngstromBond

Advanced Polymers for High Tech Applications SDS # AB 9088

Safety Data Sheet

according to HazCom 2012

SDS #: AB 9088 Issue Date: 9/18/2016

Revision Date: 3/18/2020

Section 1: Identification

GHS Product Identifier/Name

ÅngstromBond® AB 9088

Other means of identification

Product Code Other means of identification **AB 9088** Not available

Recommended use of the chemical and restrictions on use Identified Uses Adhesive

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

Emergency Overview: Physical State- Liquid (gel) Odor- Characteristic Color- Colorless Appearance- Transparent

Classification of the Substance or mixture:

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute Toxicity - Oral Category 4 Axute Toxicity – Inhalation (Gases) Skin corrosion/irritation Category 4 Category 2 Serious eye damage/eye irritation Category 1 Category 1A Skin sensitization Reproductive toxicity Category 2 Specific target organ toxicity (single exposure) Category 3

Target Organ Effects Respiratory system, EYES, Skin.

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Section 2: Hazard(s) Identification

Continued

GHS Label Elements:

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







Signal word:

DANGER

Hazard Statements:

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H332 – Harmful if inhaled

H335 - May cause respiratory irritation

H336 - May cause drowsiness or dizziness

H361 - Suspected of damaging fertility or the unborn child

Precautionary statements:

Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Response:

IF ON SKIN: Wash with plenty of soap and water, Take off contaminated clothing and wash before reuse, If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell, Rinse mouth

Storage:

Store in a well-ventilated place. Keep container tightly closed

Disposal:

Dispose of contents/container to an approved waste disposal plant.

Other Information:

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

Testing for acute and chronic effects determined no environmental classification is rquired

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Section 3: Composition / Information on Ingredients

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Substances:

Chemical Name	CAS No.	%	Trade Secret	Classification (Reg. 1272/2008)
Methacrylic ester	Proprietary	10-24	*	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Chronic 3 (H412) Aquatic Acute 2 (H401)
N, N-Dimethylacrylamide	2680-03-7	10-24	*	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Eye Dam. 1 (H318) Flam. Liq. 4 (H227)
2-Hydroxyethyl methacrylate	868-77-9	5-9	*	Skin Irrit. 2 (H315) Eye Irrit. 2A (H319) Skin Sens. 1 (H317)
Acrylic acid	79-10-7	1-<3	*	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H312) Skin Corr. 1 (H314) Aquatic Acute 1 (H400)
Photoinitiator	Proprietary	1-<3	*	Acute Tox. 4 (H302) Aquatic Chronic 2 (H411)
Visible Photoinitiator	Proprietary	<1	*	Repr. 2 (H361f) Aquatic Chronic 2 (H411)
Silane Coupling Agent	Proprietary	<1	*	Skin Sens. 1 (H317)

Remaining ingredients are not considered hazardous in accordance with the Globally Harmonized System (GHS) *The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: First-Aid Measures

Description of first aid measures:

General advice

IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.

Flush eyes with water for at least 15 minutes. Get medical attention if eye irritation develops or persists.

Skin Contact

Wash off immediately with plenty of water, get medical attention if irritation develops and persists.

Inhalation

Remove to fresh air, if symptoms persist, call a physician.

Ingestion

If swallowed, Rinse mouth, Get medical attention.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Main Symptoms: No information available.

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Section 4: First-Aid Measures

Continued

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

Section 5: Fire-Fighting Measures

Extinguishing Media:

Suitable extinguishing media

Use CO2, dry chemical, or foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke.

Hazardous combustion products

Hazardous decomposition products due to incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Personal precautions

Ensure adequate ventilation, Wear protective gloves/clothing and eye/face protection.

Environmental precautions:

Environmental precautions

Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses, See Section 12 for additional Ecological Information, Local authorities should be advised if significant spillages cannot be contained.

Other Information

See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up:

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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Section 7: Handling and Storage

Precautions for safe handling:

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice, ensure adequate ventilation, protect from

Conditions for safe storage, including any incompatibilities:

Technical measures and storage conditions

Keep container tightly closed in a dry and well-ventilated place, protect from light.

Incompatible products

Amines, Strong oxidizing agents, Strong acids, Strong bases, Oxygen scavengers, Thiosulfates.

Section 8: Exposure Controls / Personal Protection

Control Parameters:

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acrylic Acid	TWA: 2 ppm S*	(vacated) TWA: 10 ppm	TWA: 2 ppm
79-10-7 (1-<3 %)		(vacated) TWA: 30 mg/m ₃ S*	TWA: 6 mg/m₃

ACGIH (American Conference of Governmental Industrial Hygienists)

TLV - Threshold Limit Value

OSHA (Occupational Safety and Health Administration of the US Department of Labor)PEL - Permissible Exposure Limits

NIOSH IDLH

Immediately Dangerous to Life or Health

Appropriate engineering controls:

Engineering Measures

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side-shields, if splashes are likely to occur, wear: Goggles.

Skin and body protection

Wear protective gloves and protective clothing.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced. ventilation and evacuation may be required, do not breathe vapors, mist or gas.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice, when using do not eat, drink or smoke, Wear suitable gloves and eye/face protection, Wash hands before breaks and at the end of workday, Regular cleaning of equipment, work area and clothing is recommended.

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Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties:

Physical state Liquid (gel) Appearance Color Transparent Colorless Odor Characteristic No information available Odor threshold

Property Values Remarks / • Method pH
Melting point / freezing point No information available No information available Boiling point / boiling range No information available Flash point 101 °C / 214 °F **Evaporation rate** No information available

Flammability (solid, gas) Flammability Limit in Air
Upper flammability limit -

Lower flammability limit

Vapor pressure Vapor density No information available Specific Gravity No information available Water Solubility Practically insoluble Solubility in other solvents No information available No information available No information available Partition coefficient: n-octanol/water Autoignition temperature

Decomposition temperature Dynamic viscosity 35.000 cP Kinematic viscosity **Explosive properties**

No information available No information available No information available No information available

No information available

Oxidizing properties Other Information:

Softening point No information available Molecular weight No information available VOC Content (%) No information available Density Bulk density No information available No information available

Section 10: Stability and Reactivity

Reactivity:

No data available

Chemical Stability:

Stable under normal conditions Possibility of hazardous reactions:

None under normal processing

Conditions to avoid:

Protect from light, heat, flames and sparks

Incompatible materials:

Amines, Strong oxidizing agents, Strong acids, Strong bases, Oxygen scavengers.

Hazardous decomposition products:

No decomposition if stored and applied as directed.

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Section 11: Toxicological Information

Information on toxicological effects:

Acute toxicity

Information on likely routes of exposure

Inhalation There is no data for this product Eye contact There is no data for this product Skin Contact There is no data for this product Ingestion There is no data for this product

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available. Mutagenic effects No information available. Reproductive toxicity No information available.

Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

STOT - single exposure No information available. STOT - repeated exposure No information available.

Target Organ Effects Respiratory system, EYES, Skin.

Aspiration hazard No information available Other adverse effects No information available.

Chronic toxicity Repeated contact may cause allergic reactions in very susceptible persons Avoid repeated exposure

Numerical measures of toxicity - Product Information

0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 1415 mg/kg ATEmix (dermal) 2831 mg/kg ATEmix (inhalation-gas) 4839 ppm ATEmix (inhalation-dust/mist) 74.9 mg/l ATEmix (inhalation-vapor)

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Methacrylic ester	LD50 2400 mg/kg (Rat)	LD50 > 3000 mg/kg (Rabbit)	
N,N-Dimethylacrylamide	252 mg/kg (Rat)	907 mg/kg (Rabbit)	776 ppm (Rat) 1 h
2-Hydroxyethyl	= 5050 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	
methacrylate			
Acrylate Monomer		LD50 > 1,000 mg/kg (Rabbit)	
Acrylic Acid	= 193 mg/kg (Rat)	= 280 µL/kg (Rabbit)	= 5300 mg/m3 (Rat) 2 h
	= 33500 μg/kg (Rat)	= 295 mg/kg (Rabbit)	
Photinitiator	= 1694 mg/kg (Rat)		
Silane Coupling Agent	>5000 mg/kg (Rat)		

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Section 12: Ecological Information

Ecotoxicity:

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Acute aquatic toxicity

Product Information

Testing for acute and chronic aquatic effects determined no environmental classification is required.

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Methacrylic ester	EbC50 0.9 mg/l ErC50 2.7 mg/l NOEC 0.3 mg/l	LC0 1.8 mg/l 96 h (Danio rerio) NOEC 1.0 mg/l (Danio rerio)	EC50 1.1 mg/l 48 h (Daphnia)
N,N-Dimethylacrylamide		LC50 > 120 mg/L 96 h (Oncorhynchus mykiss)	EC50 > 120 mg/l 48 h (Daphnia magna)
2-Hydroxyethyl methacrylate		LC50 = 227 mg/L 96 h (Pimephales promelas)	EC50 > 380 mg/l 48 h (Daphnia magna)
Acrylic Acid	EC50 0.04 mg/L 72 h (Desmodesmus subspicatus)	LC50 = 222 mg/L 96 h (Brachydanio rerio)	EC50 = 95 mg/L 48 h
Silane Coupling Agent	EC50 > 536,00 mg/L 72 h (Scenedesmus subspicatus)	LC50 > 1024,00 mg/l 96 h (Brachydanio rerio))	EC50 > 876,00 mg/l 48 h (Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical Name	log Pow
Acrylic Acid	0.46
2-Hydroxyethyl methacrylate	0.47

Mobility in soil

No product level data available.

Section 13: Disposal Considerations

Waste treatment methods:

Dispose of waste in compliance with local and national regulations.

Contaminated packaging

Dispose of in accordance with local regulations.

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Section 14: Transport Information

DOT Not regulated Not regulated Not regulated Not regulated

Section 15: Regulatory Information

International Inventories:

TSCA Complies **AICS** Complies DSL/NDSL Complies **EINECS/ELINCS** Complies **ENCS** Complies **IECSC** Complies KECL Complies **NZIoC** Not listed **PICCS** Not listed TCSI Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical

Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substance Inventory

US Federal Regulations:

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	SARA 313 - Threshold Values %
Acrylate Monomer	1.0
Acrylic Acid	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

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Section 15: Regulatory Information

continued

CERCL A

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acrylic Acid	5000 lb		RQ 5000 lb final RQ
_			RQ 2270 kg final RQ

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Acrylate Monomer	X		X
Acrylic Acid	X	X	X
Stabilizer	X	X	X

California Proposition 65

This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



WARNING

Chemical Name	California Proposition 65
Fumed Silica (5.937%)	Carcinogen

Section 16: Other Information

SDS Creation Date: 9/18/2016 SDS Revision Date: 3/18/2020

Reason for Revision: Update information for GHS format For more information: phone: 1-800-473-4237, fax: 1-508-991-8876

Prepared by Fiber Optic Center, Inc.

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Fiber Optic Center**, Inc. MAKES NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS OR OTHERWISE, with respect to its products. In addition, while the information herein is believed to be reliable, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof. All recommendations or sugestion for use are made without guarantee – inasmuch as conditions of use are beyond our control. The properties given are typical values and are not intended for use in preparing specifications. Users should make their own trest to determine the suitability of this product for their own purposes. This warranty is limited to a credit or replacement of the product only, and does not cover direct, indirect, consequential, incidental or any other type of damage resulting from the use of the product.

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