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MMA 320, MMA 420, MMA 520
Structural Methacrylate Adhesive - Cartridges

Date 10/2019

Section 1 IDENTIFICATION
Product Name: MMA 320, MMA 420, MMA 520, Structural Acrylic Bonding Adhesive - Cartridges
Manufacturer: Infinity Bond Adhesives.
7667 Cahill Rd #100
Minneapolis, MN 55439
Phone: (844)366-7272
Email: sales@infinitybond.com
Website: www.infinitybond.com
Trade Name: MMA 320, MMA 420, MMA 520, Structural Acrylic Bonding Adhesives
Materials Uses: High strength acrylic adhesive for bonding fiberglass, steel, aluminum, and various substrates together. 10:1 product has high flexible strength and tensile strengths.
In Case of Emergency Contact CHEMTREC: 1-800-424-9300
Section 2 HAZARD IDENTIFICATION
GHS Classification:

CATEGORY	SIGNAL WORD	HAZARD STATEMENT(S)
Physical Flammable Liquids, Category 2 Organic Peroxides, Type F	DANGER WARNING	H225 – Highly flammable liquid and vapor H242 – Heating may cause a fire
Health Acute Oral Toxicity, Category 4 Skin Corrosion, Category 1 Serious Eye Damage, Category 1 Skin Sensitization, Category 1 STOT SE, Category 3	WARNING WARNING WARNING WARNING WARNING	H302 – Harmful if swallowed H314 – Causes severe skin burns and eye damage H318 – Causes serious eye damage H317 – May cause an allergic skin reaction H335 - May cause a respiratory irritation
Environmental Acute, Category 3 Chronic, Category 4		H402 – Harmful to aquatic life H413 – May cause long lasting harmful effects to aquatic life


GHS Precaution Statements:
Prevention:

- P210 – Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 – Keep container tightly closed.
- P240 – Ground/Bond container and receiving equipment.
- P241 – Use explosion-proof electrical/ventilating/lighting equipment.
- P242 – Use only non-sparking tools.

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- P243 – Take precautionary measures against static discharge.
P260 – Do not breathe dust/fume/gas/mist/vapors/spray.
P261 – Avoid breathing dust/fume/mist/vapors/spray.
P264 – Wash hands (or other affected skin surfaces) 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:

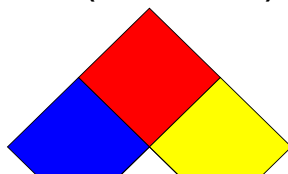
- P301/P330/P331 – IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P302/P352 – IF ON SKIN: Wash with plenty of soap and water.
P303/P361/P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304/P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305/P351/P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 – Immediately call a POISON CENTER or doctor/physician.
P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
P333/P313 – If skin irritation or rash occurs get medical advice/attention.
P362/P364 – Take off contaminated clothing and wash it before reuse.
P363 – Wash contaminated clothing before reuse.
P370/P378 – In case of fire: Use dry chemical or CO₂ to extinguish small fires. Use water for large fires.

Storage:

- P403 – Store in a well-ventilated place.
P405 – Store locked up.
P410 – Protect from sunlight.
P411 – Store at temperatures not exceeding 25°C (75°F).

Disposal:

- P501 – Dispose of contents/containers in accordance with local/regional/national/international regulations.

Route of Entry: Eye contact, skin contact, inhalation, and ingestion.**Target Organs:** Skin, eyes, respiratory tract, digestive tract, liver, kidney, olfactory and Central Nervous System (CNS).**Skin Contact:** May cause irritation of the skin. Prolonged exposure may cause sensitization. Preexisting skin conditions may be aggravated by exposure to this material.**Eye Contact:** May cause irritation and/or sensitization.**Respiratory Contact:** Respiratory tract irritant. Prolonged exposure may result in dizziness, nausea, headache, and anesthetic effects. May cause sensitization. Preexisting respiratory conditions may be aggravated by exposure to this product. May cause CNS depression.**Ingestion:** Not an expected route of entry. If ingested it may cause irritation to the gastrointestinal tract.**ADHESIVE:****HMIS (United States)****NFPA (United States)****WHMIS (Canada): B2, D2B**

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Health	3		
Flammability	3	3	
Reactivity	2		
PPE	B	3	2

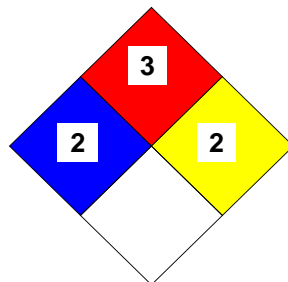


ACTIVATOR:

HMIS (United States)

Health	2
Flammability	3
Reactivity	2
PPE	B

NFPA (United States)



WHMIS (Canada): C, D2B



Section 3 COMPOSITION / INFORMATION ON INGREDIENTS

	Name	CAS #	% by Weight
Adhesive:	Methyl Methacrylate Monomer	80-62-6	40 – 80
	Methacrylic Acid	79-41-4	1 – 10
Activator:	Benzoyl Peroxide	94-36-0	5 – 30

Section 4 FIRST-AID MEASURES

Skin: Remove contaminated clothing. Flush skin with water, then wash affected areas with soap and water. If irritation develops, seek medical attention. Wash or dispose of clothing before reuse.

Eye: Flush eyes with water for 15 minutes. Remove contact lenses prior to water flush if possible. Seek immediate medical attention.

Respiratory: Remove patient to fresh air. If patient is having difficulty breathing, seek immediate medical attention. If not breathing, clear airway and start mouth-to-mouth artificial respiration (or use bag-mask respirator). Seek immediate medical attention.

Ingestion: Give patient water to dilute material in stomach. DO NOT induce vomiting. Seek immediate medical attention. If vomiting occurs naturally, have person lean forward to reduce risk of aspiration. DO NOT give anything by mouth to an unconscious person.

Section 5 FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: In case of fire, use dry chemical or CO₂. Water spray may cause frothing.

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Specific Hazards Arising from the Chemical: Sealed containers of adhesive may rupture violently at elevated temperatures due to polymerization. Organic peroxides can decompose violently if heated while confined.

Special Protective Equipment and Precautions for Firefighters: Use self-contained breathing apparatus (SCBA) and protective clothing.

Flash Point and Method: 50°F (10°C). Fine mists may be explosive below the flash point. Tag Closed Cup.

Flammability Classification: Class 1B.

Risk of Explosion due to Mechanical Impact: Not Applicable.

Risk of Explosion due to Static Discharge: Not Applicable.

Hazardous Products of Combustion: Carbon Oxides (CO and CO₂), Methyl Methacrylate, and various Hydrocarbons.

Autoignition Temp.: 790°F (421°C).

LEL: 1.7%.

UEL: 12.5%.

Section 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: For large spill or leak wear self-contained breathing apparatus (SCBA) and appropriate PPE.

Environmental Precautions: Keep out of sewers and drains.

Clean-Up Methods and Materials: Absorb with an inert material and place in an appropriate container for disposal.

Section 7 HANDLING AND STORAGE

Handling Precautions: Avoid breathing vapors. Use in a well-ventilated area. Wear rubber gloves (nitrile or butyl) and chemical resistant apron. Wear chemical splash goggles. Do not reuse empty containers.

Storage Precautions: Store in a cool, dry, well-ventilated area at temperatures less than 75°F (25°C). Storage above 212°F (100°C) may cause explosive decomposition. Avoid storage in direct sunlight. Keep containers closed when not in use. Keep away from heat sources, sparks, and open flames.

Section 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters and Exposures:

Material Name:

Benzoyl Peroxide (CAS 94-36-0):

Methacrylic Acid (CAS 79-41-4):

Methyl Methacrylate (CAS 80-62-6):

Exposure Limits:OSHA PEL: TWA 5 mg/m³ACGIH TLV: TWA 5 mg/m³

ACGIH TLV: TWA 20 ppm

OSHA PEL: TWA 100 ppm

ACGIH TLV: TWA 50 ppm

STEL 100 ppm

Engineering Controls: Provide adequate explosion proof ventilation (general or local exhaust). Ensure that a working eyewash and safety shower are in the work area.

Individual Protection Measures and PPE:

Eye / Face Protection: Wear safety glasses with side shields or splash goggles.

Skin Protection: Chemical resistant gloves (nitrile or butyl) and chemical resistant apron are recommended.

Respiratory Protection In case of insufficient ventilation, wear an approved (NIOSH) respirator with organic vapor cartridge and dust/mist pre-filter.

Thermal Hazards: None.

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Section 9 PHYSICAL AND CHEMICAL PROPERTIES

	Adhesive	Activator
Appearance:	Colored (various) Paste	Colored (various) paste
Odor:	Mild Sweet	Mild Sweet
Odor Threshold:	Not Available	Not Available
pH:	4.0 – 6.0	4.0 – 6.0
Melting Point / Freezing Point:	-54°F (-48°C)	Not Available
Initial Boiling Point:	212°F (100°C)	> 550°F (288°C)
Flash Point and Method:	50°F (10°C) Tag Closed Cup	Not Available
Evaporation Rate:	3	<1 (butyl acetate = 1)
Flammability:	Class 1B	Class 1B.
Lower Explosion Limit:	1.7%	Not Available
Upper Explosion Limit:	12.5%	Not Available
Vapor Pressure:	28 mm Hg @ 68°F (20°C)	< 0.5 mm Hg @ 68°F (20°C)
Vapor Density:	3.5	Not Available
Relative Density:	7.7 – 8.8 lbs./gallon	Not Available
Solubility(ies):	Not Available	Not Available
Partition Coefficient (n-Octanol in Water):	Not Applicable	Not Applicable
Auto-Ignition Temperature:	790°F (421°C)	Not Available
Decomposition Temperature:	Not Available	Not Available
Viscosity (Dynamic CPS/mPa-s):	60k – 250k	40k to 120k
Percent Volatile:	Not Available	Not Available
Specific Gravity:	0.93 – 1.05	1.0 to 1.15
VOC:	< 50 g/L of mixed product	Not Available

Section 10 STABILITY AND REACTIVITY

Reactivity: Product is stable as supplied and when used as intended. Product can become unstable under certain conditions or in contact with incompatible materials.

Chemical Stability: Not Available.

Possibility of Hazardous Reactions: Polymerization may occur under certain conditions.

Conditions to Avoid: Avoid extreme temperatures, open flames, sparks, and direct sunlight.

Materials to Avoid (Incompatibility): Oxidizing agents and conditions, strong acids and alkalies, oxygen-free atmospheres, inert gas blanketing, and free radical initiators.

Hazardous Decomposition Products: Carbon Oxides (CO, CO₂), Methyl Methacrylate, and various Hydrocarbons.

Section 11 TOXICOLOGICAL INFORMATION
Acute Toxicity to Animals:

Adhesive: Methyl Methacrylate (CAS 80-62-6):	LC50 = 7093 ppm (4 hour inhalation, rat) LD50 = 7940 mg/kg (oral, rat) LD50 > 7550 mg/kg (dermal, rabbit)
Methacrylic Acid (CAS 79-41-4):	LC50 = 7100 mg/m ³ (4 hour inhalation, rat) LD50 > 7550 mg/kg (oral, rat) LD50 = 1600 mg/kg (oral, mouse)

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Activator: Benzoyl Peroxide (CAS 94-36-0):

LD50 > 500 mg/kg (dermal, rabbit)
LC50 = 2 mg/L (96 hour inhalation, guppy)
LD50 = 6400 mg/kg (oral, rat)
LD50 > 2000 mg/kg (oral, mouse)

Acute Toxicity to Humans: This product has not been tested for human effects. No additional information.
Chronic Toxicity to Animals: This product has not been tested for animal effects. No additional information.
Chronic Toxicity to Humans: This product has not been tested for human effects. No additional information.
Skin Corrosion / Irritation: Not Available.
Eye Damage / Irritation: Not Available.
Respiratory Sensitization: Not Available.
Skin Sensitization: Not Available.
Mutagenicity: Classifiable as "none" for human.
Carcinogenicity: Not classifiable for human or animal.
Reproductive Toxicity: Not Available.
Teratogenic Effects: Classifiable as "none" for human.
STOST- Single Exposure: Not Available.
STOST – Repeated Exposure: Not Available.
Aspiration Hazard: Not Available.

Section 12 ECOLOGICAL INFORMATION

Ecotoxicity: This product contains components that may be harmful to aquatic organisms and may cause long term adverse effects in an aquatic environment.
Persistence and Degradability: Not Available.
Bioaccumulative Potential: This product contains components with the potential to bio-accumulate.
Mobility in Soil: Not Available.
Other Adverse Effects: Not Available.

Section 13 DISPOSAL CONSIDERATIONS**Disposal Methods:**

Adhesive: Adhesive is considered Hazardous Waste Product per RCRA 40 CFR 261 and is classed as D001. Spilled, contaminated, or waste material should be put into a suitable container and handled according to Federal, State, and local regulations. Contact a qualified waste management company for assistance.
Activator: Not a hazardous waste product (RCRA 50 CFR 261). May be disposed of by landfill or incineration. Dispose of in accordance with Federal, State, and local regulations.
DANGER! Rags, steel wool, and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. Waste should be immediately placed in a sealed water filled container.

Section 14 TRANSPORT INFORMATION

UN Number: UN1133.
UN Proper Shipping Name: Adhesives (DOT), Flammable Liquid.
Transport Hazard Class: 3.
Packing Group: II

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DOT Classification: UN1133, Adhesives, Flammable Liquid, Hazard Class 3, Packing Group II, Limited Quantity.

Special Provision for Transport: 1 Liter (0.3 gallon) or less may use Limited Quantity exceptions (49 CFR 172.102 & 49 CFR 173.150 (a) (2)).

ADR / RID Classification: Class 3 Flammable Liquid.

ICAO/IATA Classification: Class 3 Flammable Liquid.

IMO/IMDG Classification: Class 3 Flammable Liquid.

Marine Pollutant: No additional information.

Section 15 REGULATORY INFORMATION
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U.S. Federal Regulations

Chemical (& CAS Number)	SARA 302 (EHS)TPQ	SARA 304 (EHS)Rq	SARA 313 <i>de minimis</i>	CERCLA Rq	CAA 112(r) TQ	RCRA Code
Benzoyl Peroxide (CAS 94-36-0)			1.0			
Methyl Methacrylate (CAS 80-62-6)			1.0	1000		U162
Methacrylic Acid (CAS 79-41-4)						

All quantities in pounds.

State Regulations

Chemical (& CAS Number)	CA Prop 65	MA RTK	MN RTK	NJ RTK	PA RTK	RI RTK
Benzoyl Peroxide (CAS 94-36-0)		X		X	X	X
Methyl Methacrylate (CAS 80-62-6)		X	X	X	X	X
Methacrylic Acid (CAS 79-41-4)		X			X	

TSCA (Toxic Substances Control Act): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory Requirements.

International Regulations:
DSL (Canada Domestic Substance List): All components of this product are on the DSL (Canada Domestic Substance List) or are exempt from DSL.

EINECS: Not Available.

WHMIS: B2, C, D2B.

Section 16 OTHER INFORMATION

Changes to This Revision: Oct 2019

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named manufacturer nor any of its subsidiaries assumes any liability whatsoever for accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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Safety Data Sheet

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END OF SDS DOCUMENT