

Freeman MA 8221 Methacrylate Adhesive

Section 1 Identification

Product identifiers

Product name: Freeman MA 8221 Methacrylate Adhesive

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Two-part high strength acrylic adhesive for Industrial / Professional Use Only

Details of the supplier of the Safety Data Sheet

Freeman Manufacturing & Supply Company
1101 Moore Road, Avon, OH 44011
Telephone (440) 934-1902
Email contactus@freemansupply.com

24 Hour Emergency Telephone Number:
CHEMTREC (800) 424-9300

Section 2 Hazards Identification

GHS Classification in accordance with 29 CFR 1910.1200 (OSHA HCS)

Flammable Liquids – Category 2
Acute Oral Toxicity, Category 4
Skin Irritation, Category 2
Eye Irritation, Category 2A
Skin Sensitization, Category 1
Specific Target Organ Toxicity (Single Exposure) (Respiratory tract irritation) – Category 3
Environmental, Acute, Category 3
Environmental, Chronic, Category 4

GHS Label Elements



Danger

Hazard Statements

H225 – Highly flammable liquid and vapor
H302 – Harmful if swallowed
H315 – Causes skin irritation
H319 – Causes serious eye irritation
H317 – May cause an allergic skin reaction
H335 – May cause a respiratory irritation
H402 – Harmful to aquatic life
H413 – May cause long lasting harmful effects to aquatic life

Precautionary Statements

Prevention: P210 – Keep away from heat/sparks/open flames/hot surfaces. No smoking.
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.
P273 – Avoid release to the environment
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
Response: P370/P378 – In case of fire: Use dry chemical or CO2 to extinguish
P305/P351/P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301/P312 – IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P302/P352 – IF ON SKIN: Wash with plenty of soap and water.

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P333/P313 – If skin irritation or rash occurs get medical advice/attention.

Storage: P403 – Store in a well-ventilated place.

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.

Section 3 Composition/Information on Ingredients

Adhesive

Ingredient Name	CAS Number	Weight (%)
Methyl Methacrylate Monomer	80-62-6	40 - 70
Methacrylic Acid	79-41-4	1 - 5
Non-Hazardous Ingredients	Not Applicable	15 - 35

Activator

Ingredient Name	CAS Number	Weight (%)
Methyl Methacrylate Monomer	80-62-6	40 - 70
Non-Hazardous Ingredients	Not Applicable	15 - 35

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. Dispose of contaminated clothing, or wash 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, water spray, fog, dry chemical or CO₂, or alcohol resistant foam.

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. Fine mists may be explosive below the flash point, 10°C (50°F).

Hazardous Decomposition Products

Decomposition products may include: Carbon dioxide, carbon monoxide, Methyl Methacrylate, and various hydrocarbons.

Special Protective Equipment and Precautions for Firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, and rubber boots. In enclosed spaces, use self-contained breathing apparatus (SCBA).

Flammability Classification: Class 1B

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Section 6 Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures

Keep unnecessary personnel away. Avoid contact with skin or inhalation of spillage, dust or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition. For large spill or leak wear self-contained breathing apparatus (SCBA) and appropriate PPE.

Environmental Precautions

Avoid releases to the environment. 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 74°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

Components with workplace control parameters

Material Name	OSHA PEL	ACGIH TLV
Methacrylic Acid (CAS 79-41-4)	Not established	TWA 20 ppm
Methyl Methacrylate (CAS 80-62-6)	TWA 100 ppm	TWA 50 ppm, STEL 100 ppm

Engineering Controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

Personal Protective Equipment

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

Skin Protection: Wear chemical resistant gloves (nitrile or butyl) and chemical resistant apron

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

Safety Stations

Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available.

General Hygienic Practices

Avoid breathing vapor or mist. Wash thoroughly after handling materials. Avoid contamination of food, beverages, or smoking. Clean contaminated clothing thoroughly before reuse.

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Section 9 Physical and Chemical Properties

	Adhesive	Activator
Appearance	Colored (various) paste	Colored (various) liquid
Odor	Mild, sweet	Mild, sweet
Odor Threshold	No data available	No data available
pH	4.0 – 6.0	4.0 – 6.0
Freezing Point	-48°C (-54°F)	-48°C (-54°F)
Initial Boiling Point	100°C (212°F)	100°C (212°F)
Flash Point (Closed Cup)	10°C (50°F)	10°C (50°F)
Evaporation Rate	3	3
Flammability	Class 1B	Class 1 B
Lower Explosive Limit (LEL)	1.7%	1.7%
Upper Explosive Limit (UEL)	12.5%	12.5%
Vapor Pressure	28 mm Hg at 68°F	28 mm Hg at 68°F
Vapor Density	3.5	3.5
Relative Density	7.7 – 8.8 lb./gal	7.7 – 8.8 lb./gal
Specific Gravity	0.93 – 1.05	0.93 – 1.05
Water Solubility	No data available	No data available
Coefficient: n-octanol/water	No data available	No data available
Auto-Ignition Temperature	421°C (790°F)	421°C (790°F)
Decomposition Temperature	No data available	No data available
Viscosity	20,000 to 200,000 cP	20,000 to 200,000 cP
Percent Volatile	No data available	No data available
VOC	< 50 g/L of mixed product	< 50 g/L of mixed product

Section 10 Stability and Reactivity

Reactivity	Product is stable under normal conditions.
Chemical Stability	The product is stable.
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	Incompatible with strong oxidizing materials, strong acids, strong alkalis, oxygen free atmospheres, inert gas blanketing, and free radical initiators.

Section 11 Toxicological Information

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.

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Section 11 Toxicological Information

Acute Toxicity

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/m3 (4 hour inhalation, rat) LD50 > 7550 mg/kg (oral, rat) LD50 = 1600 mg/kg (oral, mouse) LD50 > 500 mg/kg (dermal, rabbit)

Chronic Toxicity

This product has not been tested. No additional information.

Respiratory or Skin Sensitization

No data available

Germ Cell Mutagenicity

Classifiable as "none" for human

Carcinogenicity

Not classified for human

Reproductive Toxicity

No data available

Specific Target Organ Toxicity (STOT)

- Single Exposure	No data available
- Repeated Exposure	No data available

Aspiration Hazard

No data available

Section 12 Ecological Information

Ecotoxicity

This product contains components that may be toxic 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

DOT Classification

UN/NA Number	UN1133
Proper Shipping Name	Adhesives, Flammable Liquid
Class	3
Packing Group	II

Limited Quantity

Yes

Marine Pollutant

No information available

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Section 14 Transport Information continued

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)).

Section 15 Regulatory Information

Inventories

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

EINECS: Not Available.

WHMIS: B2, C, D2B

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

U.S. Federal Regulations

SARA 302 (EHS) TPQ: Not regulated

SARA 304 (EHS) RQ: None

SARA 311/312 Chemical: See Section 2

SARA 313 (TRI reporting)

Chemical (& CAS Number)	SARA 313 <i>de minimis</i>	CERCLA RQ
Methyl Methacrylate (CAS 80-62-6)	1.0	1000 lb

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPS) List: Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.

California Proposition 65

This product is not known to contain any chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. For more information, visit www.P65Warnings.ca.gov.

Section 16 Other Information

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Issue Date: October 17, 2022