

**BIMAX® EMA****Safety Data Sheet 9218**

Revision date: 12/28/2022

Version: 1.0

**SECTION 1: Identification****1.1. Identification**

Product name : BIMAX® EMA  
 Product code : 9218  
 Product form : Substance  
 Physical state : Liquid  
 Chemical name : Ethyl methacrylate

**1.2. Recommended use and restrictions on use**

Recommended use : Chemical intermediate

**1.3. Supplier****GELEST, INC.**

158 Industrial Road  
 Glen Rock, PA 17327

**USA**

T 717-227-1774 - F 717-227-1775 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS US classification**

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS US labeling**

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) :

- H225 - Highly flammable liquid and vapor
- H315 - Causes skin irritation
- H317 - May cause an allergic skin reaction
- H319 - Causes serious eye irritation
- H335 - May cause respiratory irritation

Precautionary statements (GHS US) :

- 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.  
P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing must not be allowed out of the workplace.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 - If on skin: Wash with plenty of water.  
P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower  
P304+P340 - If inhaled: Remove person to fresh air and keep 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  
P312 - Call a poison center or doctor if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: 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 media other than water to extinguish.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P403+P235 - Keep in a cool place  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : BIMAX® EMA  
CAS-No. : 97-63-2

Name	Product identifier	%	GHS US classification
ethyl methacrylate	CAS-No.: 97-63-2	> 99	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

**SECTION 4: First-aid measures****4.1. Description of first aid measures**

First-aid measures general	: Call a poison center/doctor/physician if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

**4.2. Most important symptoms and effects (acute and delayed)**

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

**4.3. Immediate medical attention and special treatment, if necessary**

Treat symptomatically.

**SECTION 5: Fire-fighting measures****5.1. Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

**5.2. Specific hazards arising from the chemical**

Fire hazard	: Highly flammable liquid and vapor.
Reactivity	: Highly flammable liquid and vapor.

**5.3. Special protective equipment and precautions for fire-fighters**

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
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**6.1.2. For emergency responders**

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

**6.4. Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

**7.2. Conditions for safe storage, including any incompatibilities**

Technical measures	: Ground/bond container and receiving equipment.
Storage conditions	: Store in a well-ventilated place. In case of fire: keep cylinder cool by spraying with water. Keep container tightly closed. Store locked up.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

No additional information available

**8.2. Appropriate engineering controls**

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

**8.3. Individual protection measures/Personal protective equipment****Hand protection:**

Protective gloves

**Eye protection:**

Safety glasses

**Skin and body protection:**

Wear suitable protective clothing

**Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Molecular mass	: 114.15 g/mol
Color	: No data available
Odor	: Pungent.
Odor threshold	: 0.19 – 0.21 ppm
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -75 °C Source: ICSC
Freezing point	: No data available
Boiling point	: 117 °C Source: ICSC
Flash point	: 20 °C Source: ICSC

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Auto-ignition temperature	: 435 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: 40 mm Hg
Relative vapor density at 20°C	: 3.6
Relative density	: 0.9158
Density	: 0.91 g/cm³ Type: 'density' Temp.: 20 °C
Solubility	: Water: 15 g/ml
Partition coefficient n-octanol/water (Log Pow)	: 1.94
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: 0.7 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Highly flammable liquid and vapor.

### 10.2. Chemical stability

Polymerization can occur at elevated temperatures.

### 10.3. Possibility of hazardous reactions

vapors may form explosive mixture with air. Hazardous polymerization may occur.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

#### BIMAX® EMA (97-63-2)

LD50 oral rat	> 2000 mg/kg
LC50 Inhalation - Rat	55 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
ATE US (dust, mist)	38.7 mg/l/4h

#### ethyl methacrylate (97-63-2)

LD50 oral rat	> 2000 mg/kg
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# BIMAX® EMA

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### ethyl methacrylate (97-63-2)

LC50 Inhalation - Rat	55 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
ATE US (dust, mist)	38.7 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified

### BIMAX® EMA (97-63-2)

LOAEC (inhalation, rat, gas, 90 days)	350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
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### ethyl methacrylate (97-63-2)

LOAEC (inhalation, rat, gas, 90 days)	350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
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Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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### BIMAX® EMA (97-63-2)

LC50 - Fish [1]	22.075 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	> 66 mg/l Test organisms (species): Daphnia magna
LOEC (chronic)	31 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	18 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### ethyl methacrylate (97-63-2)

LC50 - Fish [1]	22.075 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	> 66 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 110 mg/l Test organisms (species): other:
LOEC (chronic)	31 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	18 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### ethyl methacrylate (97-63-2)

Partition coefficient n-octanol/water (Log Pow) 1.94

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available




## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Dispose of as unused product.  
Additional information : Flammable vapors may accumulate in the container.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
<b>14.1. UN number</b>			
2277	Not applicable	2277	2277
<b>14.2. Proper Shipping Name</b>			
Ethyl methacrylate, stabilized	Not applicable	ETHYL METHACRYLATE, STABILIZED	Ethyl methacrylate, stabilized
<b>Transport document description</b>			
UN2277 Ethyl methacrylate, stabilized, 3, II	Not applicable	UN 2277 ETHYL METHACRYLATE, STABILIZED, 3, II (20°C o.c.)	UN 2277 Ethyl methacrylate, stabilized, 3, II
<b>14.3. Transport hazard class(es)</b>			
3	Not applicable	3	3
 Not applicable			
<b>14.4. Packing group</b>			
II	Not applicable	II	II
<b>14.5. Environmental hazards</b>			
Dangerous for the environment: No	Not applicable	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			



**14.6. Special precautions for user****DOT**

UN-No.(DOT)	: UN2277
DOT Special Provisions (49 CFR 172.102)	: 387 - When materials are stabilized by temperature control, the provisions of §173.21(f) of this subchapter apply. When chemical stabilization is employed, the person offering the material for transport shall ensure that the level of stabilization is sufficient to prevent the material as packaged from dangerous polymerization at 50 °C (122 °F). If chemical stabilization becomes ineffective at lower temperatures within the anticipated duration of transport, temperature control is required and is forbidden by aircraft. In making this determination factors to be taken into consideration include, but are not limited to, the capacity and geometry of the packaging and the effect of any insulation present, the temperature of the material when offered for transport, the duration of the journey, and the ambient temperature conditions typically encountered in the journey (considering also the season of year), the effectiveness and other properties of the stabilizer employed, applicable operational controls imposed by regulation (e.g.requirements to protect from sources of heat, including other cargo carried at a temperature above ambient) and any other relevant factors. The provisions of this special provision will be effective until January 2, 2019, unless we terminate them earlier or extend them beyond that date by notice of a final rule in the Federal Register. IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: C - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 25 - Protected from sources of heat

**TDG**

Emergency Response Guide (ERG) Number	: 130P
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**IMDG**

Special provision (IMDG)	: 386
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: C
Stowage and handling (IMDG)	: SW1
Flash point (IMDG)	: 20°C o.c.
Properties and observations (IMDG)	: Colourless liquid with a pungent odour. Flashpoint: 20°C o.c. Explosive limits: 1.8% to ... Immiscible with water. Irritating to skin, eyes and mucous membranes.

**IATA**

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L



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PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A209
ERG code (IATA)	: 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
ethyl methacrylate	97-63-2	Present	Active	

#### ethyl methacrylate (97-63-2)

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ

1000 lb

### 15.2. International regulations

#### CANADA

#### ethyl methacrylate (97-63-2)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

#### ethyl methacrylate (97-63-2)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

#### ethyl methacrylate (97-63-2)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

## SECTION 16: Other information

Full text of H-phrases::

H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

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H335

May cause respiratory irritation

### Abbreviations and acronyms

: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Bioconcentration factor. Biological limit value. Biochemical oxygen demand (BOD). Chemical oxygen demand (COD). Derived Minimal Effect level. Derived-No Effect Level. European Community number. Median effective concentration. European Standard. International Agency for Research on Cancer. International Air Transport Association. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Organisation for Economic Co-operation and Development. Occupational Exposure Limit. Persistent Bioaccumulative Toxic. Predicted No-Effect Concentration. Regulations concerning the International Carriage of Dangerous Goods by Rail. Safety Data Sheet. Sewage treatment plant. Theoretical oxygen demand (ThOD). Median Tolerance Limit. Volatile Organic Compounds. Chemical Abstract Service number. Not Otherwise Specified. Very Persistent and Very Bioaccumulative. Endocrine disrupting properties.

### NFPA health hazard

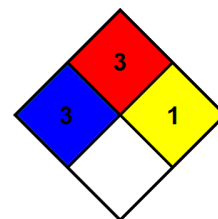
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

### NFPA fire hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

### NFPA reactivity

: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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