

BIMAX® GMMA

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
 Issue date: 9/25/2023 Revision date: 1/15/2026 Supersedes version of: 5/28/2025 Version: 2.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Substance name	: BIMAX® GMMA
Chemical name	: GLYCERYL METHACRYLATE
EC-No.	: 227-642-6
CAS-No.	: 5919-74-4
Product code	: 9205
Formula (Override)	: C7H12O4
Synonyms	: 2,3-DIHYDROXYPROPYL METHACRYLATE
Product group	: Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Medical devices

1.2.2. Uses advised against

Restrictions on use : For medical device use only

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
 158 Industrial Road
 17327 Glen Rock, PA
 USA
 T 717-227-1774, F 717-227-1775 (M-F): 8:00 AM - 5:30 PM EST
CS-Gelest@m-chem.com, www.gelest.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

May cause an allergic skin reaction. Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP)	: Warning
Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation.
Precautionary statements (CLP)	: P261 - Avoid breathing fume, mist, spray, vapours. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P302+P352 - IF ON SKIN: Wash with plenty of water.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.

2.3. Other hazards

Other hazards which do not result in classification : Hazardous polymerization may occur if exposed to high temperature.

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : BIMAX® GMMA
CAS-No. : 5919-74-4
EC-No. : 227-642-6

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Glyceryl methacrylate	CAS-No.: 5919-74-4 EC-No.: 227-642-6	> 99	Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of H- and EUH-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 : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off 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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.
Chronic symptoms : Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Avoid the use of streaming water, as this may spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.

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Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing fume, mist, spray, vapours.

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".

Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

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

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing fume, mist, spray, vapours. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool dark environment. Protect from heat and direct sunlight.

Incompatible materials : Free radical initiators. Oxidizing agents. Reducing agents. Iron.

Storage temperature : < 5 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

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8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

BIMAX® GMMA (5919-74-4)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	2.1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	7.4 mg/m ³

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Not available
Appearance	: Clear liquid.
Molecular mass	: 160.2 g/mol
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: 140 °C at 0.6 mmHg
Flammability	: Not applicable
Explosive limits	: Not available

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Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 127.3 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water. Water: 100 g/l at 25 °C
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: -0.12 @ 23 °C
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.161 g/ml
Relative density	: 1.155 at 20 °C
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Other properties : Self-accelerating Polymerization Temperature (SAPT) ≤ 75°C (tested according to UN Test H.4)

SECTION 10: Stability and reactivity

10.1. Reactivity

Hazardous polymerization may occur if exposed to high temperature.

10.2. Chemical stability

Stable under normal conditions. Contains the following stabilizer(s): MEHQ.

10.3. Possibility of hazardous reactions

Hazardous polymerization can occur at temperatures ≤ 75 °C.

10.4. Conditions to avoid

Heat and light.

10.5. Incompatible materials

Free radical initiators. Oxidizing agents. Reducing agents. Iron.

10.6. Hazardous decomposition products

In the event of fire: see section 5.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

Glyceryl methacrylate (5919-74-4)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
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Glyceryl methacrylate (5919-74-4)

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

Glyceryl methacrylate (5919-74-4)

LOAEL (animal/female, F0/P)	500 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Glyceryl methacrylate (5919-74-4)

LOAEL (oral, rat, 90 days)	500 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Aspiration hazard	: Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Glyceryl methacrylate (5919-74-4)

LC50 - Fish [1]	> 100 mg/l Test organisms (species): Cyprinus carpio
EC50 - Crustacea [1]	> 120 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 120 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

BIMAX® GMMA (5919-74-4)

Partition coefficient n-octanol/water (Log Pow)	-0.12 @ 23 °C
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12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

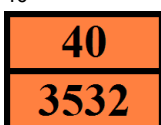
ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3532	UN 3532	UN 3532	UN 3532	UN 3532
14.2. UN proper shipping name				
POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	Polymerizing substance, liquid, stabilized, n.o.s.	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.	POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.
Transport document description				
UN 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S. (GLYCERYL METHACRYLATE), 4.1, III, (D)	UN 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S. (GLYCERYL METHACRYLATE), 4.1, III	UN 3532 Polymerizing substance, liquid, stabilized, n.o.s. (Glyceryl methacrylate), 4.1, III	UN 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S. (GLYCERYL METHACRYLATE), 4.1, III	UN 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S. (GLYCERYL METHACRYLATE), 4.1, III
14.3. Transport hazard class(es)				
4.1	4.1	4.1	4.1	4.1
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				
14.6. Special precautions for user				
Overland transport				
Classification code (ADR) : PM1				

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Special provisions (ADR)	: 274, 386, 676
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P001, IBC03
Special packing provisions (ADR)	: PP93, B19
Portable tank and bulk container instructions (ADR)	: T7
Portable tank and bulk container special provisions (ADR)	: TP4, TP6
Tank code (ADR)	: L4BN(+)
Tank special provisions (ADR)	: TU30, TE11
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV15, CV22
Hazard identification number (Kemler No.)	: 40
Orange plates	:



Tunnel restriction code (ADR) : D

Transport by sea

Special provisions (IMDG)	: 274, 386
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P001
Special packing provisions (IMDG)	: PP93
IBC packing instructions (IMDG)	: IBC03
IBC special provisions (IMDG)	: B19
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP4, TP6
EmS-No. (Fire)	: F-J
EmS-No. (Spillage)	: S-G
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW1
Segregation (IMDG)	: SG35, SG36
Properties and observations (IMDG)	: Polymerizes at elevated temperatures or in a fire. Burns vigorously. Immiscible with water. Contact with alkalis or acids may cause dangerous polymerization. The products of combustion or self-accelerating polymerization may be toxic by inhalation.

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 459
PCA max net quantity (IATA)	: 10L
CAO packing instructions (IATA)	: 459
CAO max net quantity (IATA)	: 25L
Special provisions (IATA)	: A209
ERG code (IATA)	: 3L

Inland waterway transport

Classification code (ADN)	: PM1
Special provisions (ADN)	: 274, 386, 676
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: PM1
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Special provisions (RID)	: 274, 386, 676
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P001, IBC03
Special packing provisions (RID)	: PP93, B19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP4, TP6
Tank codes for RID tanks (RID)	: L4BN(+)
Special provisions for RID tanks (RID)	: TU30, TE11
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W7
Special provisions for carriage - Loading, unloading and handling (RID)	: CW22
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 40

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	BIMAX® GMMA ; Glyceryl methacrylate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

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Germany

Air Quality Control (TA Luft)					
Category	Class	Applicable on	Local name	Max. mass flow	Max. mass concentration

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor
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Other information : Store at < 5 °C.

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

SDS EU (REACH Annex II) - Custom v22

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