

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

Revision date: 28/12/2022

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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

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 : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**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 - www.gelest.com**GELEST INC.**Fritz-Klatte-Strasse 8
65933 Frankfurt**Germany**

T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM

info@gelestde.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]**

Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause respiratory irritation. Causes skin irritation. 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)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P233 - Keep container tightly closed.

P240 - Ground and bond container and receiving equipment.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 - Wash hands, forearms and face thoroughly after handling.

P312 - Call a POISON CENTRE or doctor if you feel unwell.

2.3. Other hazardsContains no PBT/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® EMA

CAS-No.

: 97-63-2

EC-No.

: 202-597-5

EC Index-No.

: 607-071-00-2

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethyl methacrylate	(CAS-No.) 97-63-2 (EC-No.) 202-597-5 (EC Index-No.) 607-071-00-2	> 99	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335

Full text of 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

: Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor 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 or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both 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. 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	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

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/vapours/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 vapours 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/vapours/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.

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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.

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

BIMAX® EMA (97-63-2)

Denmark - Occupational Exposure Limits

Local name	Ethylmethacrylat
OEL TWA [1]	117 mg/m ³
OEL TWA [2]	25 ppm
Regulatory reference	BEK nr 1054 af 28/06/2022

ethyl methacrylate (97-63-2)

Denmark - Occupational Exposure Limits

Local name	Ethylmethacrylat
OEL TWA [1]	117 mg/m ³
OEL TWA [2]	25 ppm
Regulatory reference	BEK nr 1054 af 28/06/2022

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

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DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	10.8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	370.5 mg/m ³
Long-term - local effects, inhalation	267 mg/m ³

DNEL/DMEL (General population)

Long-term - systemic effects, inhalation	76 mg/m ³
Long-term - systemic effects, dermal	6.5 mg/kg bodyweight/day
Long-term - local effects, inhalation	189.8 mg/m ³

PNEC (Water)

PNEC aqua (freshwater)	1.8 mg/l
PNEC aqua (marine water)	1.8 mg/l
PNEC aqua (intermittent, freshwater)	1.8 mg/l

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PNEC (Sediment)

PNEC sediment (freshwater)	40 mg/kg dwt
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PNEC (Soil)

PNEC soil	1.47 mg/kg dwt
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PNEC (STP)

PNEC sewage treatment plant	100 mg/l
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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

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
Molecular mass	: 114.15 g/mol
Colour	: No data available
Odour	: Pungent.
Odour threshold	: 0.19 – 0.21 ppm
Refractive index	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=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
Auto-ignition temperature	: 435 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable

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Vapour pressure	: 40 mm Hg
Relative vapour 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
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Polymerization can occur at elevated temperatures.

10.3. Possibility of hazardous reactions

Vapours 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 : 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 CLP (dust,mist)	38.7 mg/l/4h

ethyl methacrylate (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 CLP (dust,mist)	38.7 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
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
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified

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LOAEC (inhalation, rat, gas, 90 days)

350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

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LOAEC (inhalation, rat, gas, 90 days)

350 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

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 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

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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

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. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment 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 vapours may accumulate in the container.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
2277	2277	2277	2277	2277
14.2. UN proper shipping name				
ETHYL METHACRYLATE, STABILIZED	ETHYL METHACRYLATE, STABILIZED	Ethyl methacrylate, stabilized	ETHYL METHACRYLATE, STABILIZED	ETHYL METHACRYLATE, STABILIZED
Transport document description				
UN 2277 ETHYL METHACRYLATE, STABILIZED, 3, II, (D/E)	UN 2277 ETHYL METHACRYLATE, STABILIZED, 3, II (20°C o.c.)	UN 2277 Ethyl methacrylate, stabilized, 3, II	UN 2277 ETHYL METHACRYLATE, STABILIZED, 3, II	UN 2277 ETHYL METHACRYLATE, STABILIZED, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
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)	: F1
Special provisions (ADR)	: 386
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V8
Special provisions for carriage - Operation (ADR)	: S2, S4, S20

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Hazard identification number (Kemler No.) : 339
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : 3WE
APP code : A(fl)

Transport by sea

Special provisions (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
EmS-No. (Spillage) : S-D
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.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A209
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 386
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : F1
Special provisions (RID) : 386
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 339

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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)**

Not listed on REACH Annex XVII

POP Regulation (Persistent Organic Pollutants)

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

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

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

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

VOC Directive (2004/42)

VOC content : No additional information available

Explosives Precursors Regulation (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 (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**Germany**

- Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
- Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 3; ID No. 3101).
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

- SZW-lijst van kankerverwekkende stoffen : The substance is not listed
- SZW-lijst van mutagene stoffen : The substance is not listed
- SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed
- SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed
- SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

- Class for fire hazard : Class I-1
- Store unit : 1 liter
- Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed
- Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Switzerland

- Storage class (LK) : LK 3 - Flammable liquids

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information**Abbreviations and acronyms:**

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

SDS EU (REACH Annex II) - Custom v22

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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