



BIMAX® 2-CEA

Safety Data Sheet 9042

Issue date: 08/24/2023

Revision date: 08/02/2024

Supersedes: 07/02/2024

Version: 2.1

SECTION 1: Identification

1.1. Identification

| | |
|----------------|--|
| Product name | : BIMAX® 2-CEA |
| Product code | : 9042 |
| Product form | : Substance |
| Physical state | : Liquid |
| Synonyms | : 2-PROPENOIC ACID, 2-CYANOETHYL ESTER |
| Chemical name | : 2-CYANOETHYL ACRYLATE |

1.2. Recommended use and restrictions on use

| | |
|-----------------|-----------------------------|
| Recommended use | : Laboratory chemicals |
| | : Manufacture of substances |

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 - 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

| | | |
|--|------|----------------------------------|
| Acute toxicity (oral) Category 3 | H301 | Toxic if swallowed |
| Acute toxicity (dermal) Category 3 | H311 | Toxic in contact with skin |
| Skin corrosion/irritation Category 2 | H315 | Causes skin irritation |
| Serious eye damage/eye irritation Category 2A | H319 | Causes serious eye irritation |
| 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) | : | H301+H311 - Toxic if swallowed or in contact with skin H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation |
| Precautionary statements (GHS US) | : | P261 - Avoid breathing vapors, spray, mist, fume. P280 - Wear protective clothing, eye protection, face protection, protective gloves. |

BIMAX® 2-CEA

Safety Data Sheet

P271 - Use only outdoors or in a well-ventilated area.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands thoroughly after handling.
P301+P310 - If swallowed: Immediately call a poison center or doctor.
P330 - Rinse mouth.
P312 - Call a poison center or doctor if you feel unwell.
P302+P352 - If on skin: Wash with plenty of water.
P361+P364 - Take off immediately all contaminated clothing and wash it before reuse.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
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.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
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

Name : BIMAX® 2-CEA
CAS-No. : 106-71-8

| Name | Product identifier | % | GHS US classification |
|--|--------------------|---------|---|
| 2-cyanoethyl acrylate | CAS-No.: 106-71-8 | 88 – 93 | Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 |
| 3-(2-cyanoethoxy)-3-oxopropyl acrylate | - | < 7 | Not classified |
| 2-cyanoethyl-3-(2-cyanoethoxy)propanoate | - | < 5 | Not classified |

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 physician immediately.
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 : Remove/take off immediately all contaminated clothing. Wash skin with plenty of water. If skin irritation 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.

BIMAX® 2-CEA

Safety Data Sheet

First-aid measures after ingestion : Rinse mouth. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation.
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.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin, eyes and clothing. Avoid breathing fume, mist, spray, vapors.

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".

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.
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 : Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapors, spray, mist, fume.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

BIMAX® 2-CEA

Safety Data Sheet

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Storage conditions | : Store locked up. Keep container tightly closed in a dry and well-ventilated place away from heat sources. |
| Incompatible materials | : Oxidizing agent. |
| Storage temperature | : < 32 °C |

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

Personal protective equipment:

Wear recommended 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 |
| Color | : Colorless to light yellow. |
| Odor | : No data available |
| Odor threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : 108 °C at 12 mmHg |
| Flash point | : 124 °C |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Not applicable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20°C | : 4.3 |
| Relative density | : 1.06 |
| Solubility | : No data available |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Partition coefficient n-octanol/water (Log Kow) | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Explosion limits | : No data available |

BIMAX® 2-CEA

Safety Data Sheet

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Hazardous polymerization can occur if heated. Contains the following stabilizer(s): MEHQ.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Light.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In the event of fire: see section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Toxic if swallowed.
Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Not classified

2-cyanoethyl acrylate (106-71-8)

| | |
|-----------------|-----------------------|
| ATE US (oral) | 100 mg/kg body weight |
| ATE US (dermal) | 300 mg/kg body weight |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Irritation.
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.

BIMAX® 2-CEA

Safety Data Sheet

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

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

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 DOT / TDG / IMDG / IATA

| DOT | TDG | IMDG | IATA |
|---|---|--|---|
| 14.1. UN number | | | |
| 3276 | UN3276 | 3276 | 3276 |
| 14.2. Proper Shipping Name | | | |
| Nitriles, liquid, toxic, n.o.s. (2-cyanoethyl acrylate) | NITRILES, TOXIC, LIQUID, N.O.S. (2-CYANOETHYL ACRYLATE) | NITRILES, LIQUID, TOXIC, N.O.S. (2-CYANOETHYL ACRYLATE) | Nitriles, liquid, toxic, n.o.s. (2-cyanoethyl acrylate) |
| Transport document description | | | |
| UN3276 Nitriles, liquid, toxic, n.o.s. (2-cyanoethyl acrylate), 6.1, III | UN3276 NITRILES, TOXIC, LIQUID, N.O.S. (2-CYANOETHYL ACRYLATE), 6.1, III | UN 3276 NITRILES, LIQUID, TOXIC, N.O.S. (2-CYANOETHYL ACRYLATE), 6.1, III | UN 3276 Nitriles, liquid, toxic, n.o.s. (2-cyanoethyl acrylate), 6.1, III |
| 14.3. Transport hazard class(es) | | | |
| 6.1 | 6.1 | 6.1 | 6.1 |
|  |  Not applicable |  |  |
| 14.4. Packing group | | | |
| III | III | III | III |
| 14.5. Environmental hazards | | | |
| Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No Marine pollutant: No | Dangerous for the environment: No |
| No supplementary information available | | | |

BIMAX® 2-CEA

Safety Data Sheet

14.6. Special precautions for user

DOT

| | |
|--|---|
| UN-No.(DOT) | : UN3276 |
| DOT Special Provisions (49 CFR 172.102) | : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). 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, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T7 - 4 178.274(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. TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 153 |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 203 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 241 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 60 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 220 L |
| DOT Vessel Stowage Location | : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel. |
| DOT Vessel Stowage Other | : 52 - Stow "separated from" acids |

TDG

| | |
|---|--|
| UN-No. (TDG) | : UN3276 |
| TDG Special Provisions | : 16 - 1) The technical name of the most dangerous substance related to the primary class must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(i)(A) of Part 3, Documentation. The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4, Dangerous Goods Safety Marks. 2) subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical: a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.; c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.; d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". |
| Explosive Limit and Limited Quantity Index | : 5 L |
| Excepted quantities (TDG) | : E1 |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : 60 L |
| Emergency Response Guide (ERG) Number | : 151 |

IMDG

| | |
|---------------------------------|--|
| Special provision (IMDG) | : 223, 274 |
| Limited quantities (IMDG) | : 5 L |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P001, LP01 |
| IBC packing instructions (IMDG) | : IBC03 |
| Tank instructions (IMDG) | : T7 |
| Tank special provisions (IMDG) | : TP1, TP28 |
| EmS-No. (Fire) | : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE |
| EmS-No. (Spillage) | : S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES |

BIMAX® 2-CEA

Safety Data Sheet

| | |
|------------------------------------|---|
| Stowage category (IMDG) | : A |
| Segregation (IMDG) | : SG35 |
| Properties and observations (IMDG) | : Liquids, evolving toxic vapour. React with acids or acid fumes, evolving hydrogen cyanide, a highly toxic and flammable gas. Miscible with water. Toxic if swallowed, by skin contact or by inhalation. |

IATA

| | |
|--|----------------|
| PCA Excepted quantities (IATA) | : E1 |
| PCA Limited quantities (IATA) | : Y642 |
| PCA limited quantity max net quantity (IATA) | : 2L |
| PCA packing instructions (IATA) | : 655 |
| PCA max net quantity (IATA) | : 60L |
| CAO packing instructions (IATA) | : 663 |
| CAO max net quantity (IATA) | : 220L |
| Special provision (IATA) | : A3, A4, A137 |
| ERG code (IATA) | : 6L |

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

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

| | | |
|--|---------|------|
| 3-(2-cyanoethoxy)-3-oxopropyl acrylate | CAS-No. | < 7% |
| 2-cyanoethyl-3-(2-cyanoethoxy)propanoate | CAS-No. | < 5% |

15.2. International regulations

CANADA

BIMAX® 2-CEA (106-71-8)

Listed on the Canadian NDSL (Non-Domestic Substances List)

2-cyanoethyl acrylate (106-71-8)

Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

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

2-cyanoethyl acrylate (106-71-8)

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

BIMAX® 2-CEA

Safety Data Sheet

SECTION 16: Other information

Full text of H-phrases::

| | |
|------|----------------------------------|
| H301 | Toxic if swallowed |
| H311 | Toxic in contact with skin |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

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.

NFPA health hazard

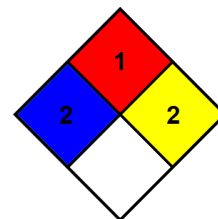
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity

: 2 - Materials that readily undergo violent chemical change at elevated temperatures and pressures.



Issue date: 08/24/2023

Revision date: 08/02/2024

Supersedes: 07/02/2024

Version: 2.1

SDS US (GHS HazCom 2012) - Custom

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

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.

© 2023 Gelest Inc. Glen Rock, PA 17327