

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Mixture
Trade name	: MONOMER I SOLUTION (LOWICRYL K11M)
Product code	: 18163A
Formula	: no data

#### 1.2. Recommended use and restrictions on use

Recommended use	: Use as laboratory reagent, Manufacture of substances
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#### 1.3. Supplier

##### Supplier

Polysciences  
400 Valley Road  
Warrington, PA 18976 - United States  
T +1 215 343 6484 - F +1 215 343 0214  
[info@polysciences.com](mailto:info@polysciences.com) - [www.polysciences.com](http://www.polysciences.com)

#### 1.4. Emergency telephone number

Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3924
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### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 4	Combustible liquid
Acute toxicity (oral) Category 4	Harmful if swallowed
Acute toxicity (dermal) Category 3	Toxic in contact with skin
Skin corrosion/irritation Category 1B	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	Causes serious eye damage
Skin sensitization, Category 1	May cause an allergic skin reaction
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	May cause respiratory irritation
Hazardous to the aquatic environment – Acute Hazard Category 1	Very toxic to aquatic life

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Combustible liquid  
Harmful if swallowed  
Toxic in contact with skin  
Causes severe skin burns and eye damage  
May cause an allergic skin reaction  
Causes serious eye damage  
May cause respiratory irritation  
Very toxic to aquatic life

Precautionary statements (GHS US)

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash hands, forearms and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.

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### 2.3. Other hazards which do not result in classification

No additional information available

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

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
Hydroxypropyl methacrylate, mixture of isomers	(CAS-No.) 27813-02-1	31 – 40	Eye Irrit. 2A, H319 Skin Sens. 1, H317
2-Hydroxyethyl acrylate	(CAS-No.) 818-61-1	21 – 30	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Dermal), H310 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Acute 1, H400
2-Ethoxyethyl Methacrylate	(CAS-No.) 2370-63-0	11 – 20	Flam. Liq. 4, H227 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
n-Butyl methacrylate	(CAS-No.) 97-88-1	11 – 20	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 2, H401
4-Methoxyphenol (MEHQ)	(CAS-No.) 150-76-5	0 – 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1, H317

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

## 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. Call a physician immediately. Rinse skin with water/shower.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. 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 : Burns. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Serious damage to eyes. Mild eye irritation.
- Symptoms/effects after ingestion : Burns.

### 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

- Fire hazard : Combustible liquid.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

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### 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

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray. No open flames, no sparks, and no smoking.

#### 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

For containment : Collect spillage.  
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 : Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
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

Storage conditions : Store at room temp. Store locked up. Keep cool. Store in a well-ventilated place. Keep container tightly closed.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>MONOMER I SOLUTION (LOWICRYL K11M)</b>
No additional information available
<b>2-Ethoxyethyl Methacrylate (2370-63-0)</b>
No additional information available
<b>2-Hydroxyethyl acrylate (818-61-1)</b>
No additional information available
<b>n-Butyl methacrylate (97-88-1)</b>
No additional information available
<b>4-Methoxyphenol (MEHQ) (150-76-5)</b>
No additional information available
<b>Hydroxypropyl methacrylate, mixture of isomers (27813-02-1)</b>
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.

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### 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 inadequate ventilation] wear respiratory protection.

**Personal protective equipment symbol(s):**

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: liquid.
Color	: Mixture contains one or more component(s) which have the following colour(s): clear Colorless
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: Sweet Fruity
Odor threshold	: No data available
pH	: no data
Melting point	: -103 °F
Freezing point	: No data available
Boiling point	: > ≥ 246 °C
Flash point	: > ≥ 200
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: no data
Relative vapor density at 20°C	: no data
Relative density	: No data available
Solubility	: Water: 10.6 g/l
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 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.

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### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

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

ATE US (oral)	1525.424 mg/kg body weight
ATE US (dermal)	513.333 mg/kg body weight

#### 2-Hydroxyethyl acrylate (818-61-1)

LD50 oral rat	540 mg/kg mg/kg
LD50 dermal rabbit	154 mg/kg mg/kg

#### n-Butyl methacrylate (97-88-1)

LD50 oral rat	16 g/kg
LD50 dermal rabbit	10181 mg/kg

Skin corrosion/irritation : Causes severe skin burns.  
pH: no data  
Serious eye damage/irritation : Causes serious eye damage.  
pH: no data  
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.

#### 2-Ethoxyethyl Methacrylate (2370-63-0)

STOT-single exposure	May cause respiratory irritation.
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#### n-Butyl methacrylate (97-88-1)

STOT-single exposure	May cause respiratory irritation.
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STOT-repeated exposure : Not classified

#### n-Butyl methacrylate (97-88-1)

LOAEC (inhalation, rat, gas, 90 days)	952 ppm Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
NOAEL (oral, rat, 90 days)	120 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available

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Symptoms/effects after inhalation : May cause respiratory irritation.  
Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Serious damage to eyes. Mild eye irritation.  
Symptoms/effects after ingestion : Burns.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

n-Butyl methacrylate (97-88-1)	
LC50 fish 1	5.57 mg/l
EC50 Daphnia 1	32 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	5.57 mg/l Test organisms (species): Oryzias latipes
NOEC chronic crustacea	1.1 mg/l

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

n-Butyl methacrylate (97-88-1)	
Partition coefficient n-octanol/water (Log Pow)	2.26

#### 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.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2227 n-Butyl methacrylate, stabilized, 3, III  
UN-No.(DOT) : UN2227  
Proper Shipping Name (DOT) : n-Butyl methacrylate, stabilized  
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120  
Packing group (DOT) : III - Minor Danger  
Hazard labels (DOT) : 3 - Flammable liquid



Dangerous for the environment : Yes

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Marine pollutant

: Yes



DOT Packaging Non Bulk (49 CFR 173.xxx)

: 203

DOT Packaging Bulk (49 CFR 173.xxx)

: 242

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.

B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.

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).

T2 - 1.5 178.274(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 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

: 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

Emergency Response Guide (ERG) Number

: 130P

Other information

: No supplementary information available.

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Transport document description (IMDG)

: UN 2227 n-BUTYL METHACRYLATE, STABILIZED, 3, III (41°C c.c.)

UN-No. (IMDG)

: 2227

Proper Shipping Name (IMDG)

: n-BUTYL METHACRYLATE, STABILIZED

Class (IMDG)

: 3 - Flammable liquids

Packing group (IMDG)

: III - substances presenting low danger

Limited quantities (IMDG)

: 5 L

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Marine pollutant

: Yes



### Air transport

Transport document description (IATA) : UN 2227 n-Butyl methacrylate, stabilized, 3, III  
UN-No. (IATA) : 2227  
Proper Shipping Name (IATA) : n-Butyl methacrylate, stabilized  
Class (IATA) : 3 - Flammable Liquids  
Packing group (IATA) : III - Low danger

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 2-Ethoxyethyl Methacrylate (2370-63-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 2-Hydroxyethyl acrylate (818-61-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### n-Butyl methacrylate (97-88-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 4-Methoxyphenol (MEHQ) (150-76-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Hydroxypropyl methacrylate, mixture of isomers (27813-02-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### 2-Ethoxyethyl Methacrylate (2370-63-0)

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

#### 2-Hydroxyethyl acrylate (818-61-1)

Listed on the Canadian DSL (Domestic Substances List)

#### n-Butyl methacrylate (97-88-1)

Listed on the Canadian DSL (Domestic Substances List)

#### 4-Methoxyphenol (MEHQ) (150-76-5)

Listed on the Canadian DSL (Domestic Substances List)

#### Hydroxypropyl methacrylate, mixture of isomers (27813-02-1)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### n-Butyl methacrylate (97-88-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations



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### n-Butyl methacrylate (97-88-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on KECL/KECI (Korean Existing Chemicals Inventory)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

Component	State or local regulations
2-Hydroxyethyl acrylate(818-61-1)	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
n-Butyl methacrylate(97-88-1)	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
4-Methoxyphenol (MEHQ)(150-76-5)	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

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#### Hazard Rating

- Health : 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 2 Moderate Hazard - Materials that are unstable and may undergo violent chemical changes at normal temperature and pressure with low risk for explosion. Materials may react violently with water or form peroxides upon exposure to air.

SDS US (GHS HazCom 2012)

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