



MATERIAL SAFETY DATA SHEET
According to Regulation (EC) No 1907/2006,
Annex II, Amended by COMMISSION
REGULATION (EU) 2015/830, According to
REGULATION (EC) No 1272/2008,
Amended by COMMISSION
REGULATION (EU) 2020/878.

MSDS No.

M-01

2-Hydroxy ethyl methacrylate

Effective From

01/03/2024

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name:	2-Hydroxy Ethyl Methacrylate
Additional identification:	2-Hydroxyethyl 2-methylacrylate; 2-Methyl-2-hydroxyethylester, -2-propenoic acid; HEMA
Identification of the product:	CAS#868-77-9 EC# 212-782-2
Index Number:	607-124-00-X
REACH registration No.:	01-2119490169-29-xxxx

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

1.2.1 Identified uses:

- SU 0: Other: SU 3 Industrial Manufacturing (all)
- SU 0: Other: SU 22 Public domain (administration, education, entertainment, services, craftsmen)
- SU 2a: Mining (without offshore industries)
- SU 2b: Offshore industries
- SU 5: Manufacture of textiles, leather, fur
- SU 6a: Manufacture of wood and wood products
- SU 6b: Manufacture of pulp, paper and paper products
- SU 7: Printing and reproduction of recorded media
- SU 9: Manufacture of fine chemicals
- SU 12: Manufacture of plastics products, including compounding and conversion
- SU 13: Manufacture of other non-metallic mineral products, e.g. plasters, cement
- SU 14: Manufacture of basic metals, including alloys
- SU 15: Manufacture of fabricated metal products, except machinery and equipment
- SU 16: Manufacture of computer, electronic and optical products, electrical equipment
- SU 17: General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment
- SU 18: Manufacture of furniture
- SU 19: Building and construction work
- SU 20: Health services
- SU 23: Electricity, steam, gas water supply and sewage treatment
- PC 1: Adhesives, sealants
- PC 2: Adsorbents
- PC 3: Air care products
- PC 7: Base metals and alloys
- PC 8: Biocidal products (e.g. disinfectants, pest control)
- PC9a: Coatings and paints, thinners, paint removers
- PC 9b:

PC 9b Fillers, putties, plasters, modelling clay

PC 9c: Finger paints

PC 14: Metal surface treatment products

PC 15: Non-metal-surface treatment products

PC18: Ink and toners

PC 19: Intermediate

PC 20: Products such as ph-regulators, flocculants, precipitants, neutralisation agents

PC 21:Laboratory chemicals

PC 23: Leather treatment products

PC 24: Lubricants, greases, release products

PC26: Paper and board treatment products

PC 29:Pharmaceuticals

PC 30: Photo-chemicals

PC 31: Polishes and wax blends

PC 32: Polymer preparations and compounds

PC33: Semiconductors

PC 34: Textile dyes, and impregnating products

PC 35:Washing and cleaning products

PC 37: Water treatment chemicals

PC 39: Cosmetics, personal care products

Coating resin, adhesive.

1.2.2 Uses advised against:

No uses advised against are identified.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): Chemical Inspection & Regulation Service Limited

Supplier(Supplier): Bloomchemag BV

Address: Sint - Antoniusstraat 16 b1, B-2400 Mol, Belgium.

Contact person(E-mail): info@bloomchemag.com

Telephone: +91 72919 74484 / 72919 74050

1.4 Emergency telephone Number:

+9172919 74050

1.5 Available outside office hours? YES NO

Section 2 Hazards Identification

2.1 Classification of the substance or mixture:

2.1.1 Classification:

The substance is classified as following according to REGULATION (EC) No 2020/878:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Skin Irrit. 2	H315
Skin Sens. 1	H317
Eye Irrit. 2	H319
Repr. 1B	H360FD

For full text of H- phrases: see section 2.2.

2.2 label elements:

Hazard Pictograms:**Signal Word(S):**

Danger

Hazard Statement:

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H319: Causes serious eye irritation

H360FD : May damage fertility. May damage the unborn child.

Precautionary statement:

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

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

P264: Wash hands thoroughly after handling.

P272: Contaminated work clothing should 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/...

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

.P308 + P313: IF exposed or concerned: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.P362 +

P364: Take off contaminated clothing and wash it before reuse.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local regulation.

2.3 Other hazards:

The substance is not PBT / vPvB.

Section 3 Composition/information on ingredients**Substance/Mixture:**

Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
2-hydroxyethyl methacrylate	01-2119490169-29-xxxx	868-77-9	212-782-2	97%
2-ethoxyethyl methacrylate	N/A	2370-63-0	219-135-3	1.0%
ethylene glycol dimethacrylate	N/A	97-90-5	202-617-2	0.2%

Section 4 First aid measures**4.1 Description of first aid measures:**

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.

4.1.2 In case of skin contact:

Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

4.1.3 In case of eyes contact:

Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

4.1.4 In case of ingestion:

Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

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

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May damage fertility. May damage the unborn child.

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

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Firefighting measures

5.1 Extinguishing media:

Suitable extinguishing media:

Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide.

Unsuitable extinguishing media:

Not available.

5.2 Special hazards arising from the substance or mixture

Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: carbon oxide (CO), nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material. May emit clouds of acrid smoke. May emit corrosive fumes.

5.3 Advice for firefighters:

Self-contained breathing apparatus with full-face mask and full protective clothing (standard wear).

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Eliminate all sources of ignition. Wear appropriate protective clothing. Avoid breathing vapors. Keep unnecessary people away; isolate hazard area and deny entry. Consider need for evacuation. Stay upwind and keep out of low areas where vapor may accumulate and ignite.

6.1.2 For emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if vapor is generated.

6.2 Environmental Precautions:

Try to prevent the material from entering drains or water courses. Advise Authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

6.3 Methods and material for Containment and Cleaning up:

Minor Spills:

Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapors and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Major Spills:

Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves.

6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment. See

Section 13 for information on disposal.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures:

Most acrylic monomers have low viscosity therefore pouring, material transfer and processing of these materials do not necessitate heating. Viscous monomers may require heating to facilitate handling. To facilitate product transfer from original containers, product must be heated to no more than 60 deg. C. (140 F.), for not more than 24 hours. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area.

Prevent concentration in hollows and sumps. DO NOT allow clothing wet with material to stay in contact with skin.

7.1.2 Advice on general

occupational hygiene:

Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Keep below 30 degC. Recommended: 2 – 8 degC.

7.2 Conditions for safe storage, including any incompatibilities:

Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area.

Suitable container: Polyethylene or lined metal pail/ can.

Storage incompatibility: Polymerisation catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidising agents.

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits:

2-hydroxyethyl methacrylate (CAS#868-77-9): Concentration limit - Long-term exposure limit value: 20 mg/m³ (Lithuania)

8.1.2 Additional exposure limits under the conditions of use:

Not available.

8.1.3 DNEL/DMEL and PNEC-Values:

Workers - Hazard via inhalation route	Systemic effects-Long term exposure	DNEL=4.9 mg/m ³
Workers - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=1.3 mg/kg bw/day
General Population - Hazard via inhalation route	Systemic effects-Long term exposure	DNEL=2.9 mg/m ³
General Population - Hazard via dermal route	Systemic effects-Long term exposure	DNEL=0.83 mg/kg bw/day
General Population - Hazard via oral route	Systemic effects-Long term exposure	DNEL=0.83 mg/kg bw/day
Hazard for aquatic organisms	Freshwater	PNEC=0.482 mg/L
Hazard for aquatic organisms	Marine water	PNEC=0.482 mg/L
Hazard for aquatic organisms	STP	PNEC=10 mg/L
Hazard for aquatic organisms	Sediment (freshwater)	PNEC= 3.79 mg/kg sediment dw
Hazard for aquatic organisms	Sediment (marine water)	PNEC=3.79 mg/kg sediment dw
Hazard for terrestrial organisms	Soil	PNEC= 0.476 mg/kg soil dw

8.2 Exposure controls:

8.2.1 Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection:

Safety glasses with side shields. Chemical goggles.

Hand protection:

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection:

Overalls. P.V.C. apron. Barrier cream.

Respiratory protection:

Use with adequate ventilation. In case of insufficient local exhaust ventilation and/or handling with open equipment: Respiratory air fed breathing apparatus if

Thermal hazards:

there is a risk of exposure to high vapor concentrations.

8.2.3 Environmental exposure controls:

Wear suitable protective clothing to prevent heat.

Avoid discharge into the environment. According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	liquid
Colour:	Colorless transparent
Odour:	Ester-like
Odour threshold:	Not available
pH:	4 (500 g/l in water)
Melting point/range (°C):	-60°C
Boiling point/range (°C):	211°C
Flash point (°C):	96°C
Evaporation rate:	Not available
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not applicable
Ignition temperature (°C):	Not available
Upper/lower explosive limits:	Not available
Vapour pressure (25°C):	0.08mmHg at 25 degC
Vapour density:	5
Density:	1.073 g/ml
Bulk density (kg/m³):	Not available
Water solubility (g/l):	Soluble in water
n-Octanol/Water (log Po/w):	Log Pow = 0.47
Auto-ignition temperature:	375 °C
Decomposition temperature:	200 – 250°C
Viscosity:	6.8 mPa.s at 20 degC
Explosive properties:	Non-explosive
Oxidising properties:	Non-oxidizing
Molecular Formula:	C ₆ H ₁₀ O ₃
Molecular Weight:	130.1418

9.2. Other information:

Fat solubility(solvent-oil to be specified)etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available

Section 10 Stability and reactivity

10.1 Reactivity:

The substance is stable under normal storage and handling conditions.

10.2 Chemical stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

10.3 Possibility of hazardous reactions:

No dangerous reactions known.

10.4 Conditions to avoid:

Incompatible materials. Heat, Light, Moisture.

10.5 Incompatible materials:	Polymerisation catalysts, such as peroxy or azo compounds, strong acids, alkalis and oxidising agents.
10.6 Hazardous decomposition products:	Carbon oxides, methacrylates (Fire conditions).

Section 11 Toxicological information

11.1 Information on toxicological effects:

Acute toxicity:	
LD50(Oral, Rat):	5564 mg/kg bw
LD50(Dermal, Rabbit):	> 5000 mg/kg bw, male
LC50(Inhalation, Rat):	Not available
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:	May damage fertility. May damage the unborn child.
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified
Aspiration hazard:	Not classified

Section 12 Ecological information

12.1 Toxicity:

Acute (short-term) toxicity:	
LC50(96h, Fish):	> 100 mg/L
EC50(48h, Crustacea):	380 mg/L
EC50(72h, Algae/aquatic plants):	836 mg/L
Chronic (long-term) toxicity:	
NOEC(Fish):	Not available
NOEC(Crustacea):	24.1 mg/L
NOEC(Algae/aquatic plants):	400 mg/L
12.2 Persistence and degradability:	Readily biodegradable
12.3 Bioaccumulative potential:	BCF:1.34-1.54
12.4 Mobility in soil:	Koc: 42.7, 20 °C
12.5 Results of PBT and vPvB assessment:	The substance is not PBT / vPvB.
12.6 Other adverse effects:	Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods:

Dispose of in accordance with all applicable local and national regulations. Use recovery/recycling where feasible, otherwise incineration is the recommended method of disposal. Empty containers may contain hazardous residues. Do not cut, puncture or weld on or near to the container. Labels should not be removed from containers until they have been cleaned. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.

Section 14 Transport information

	Land transport (ADR/RID)	Inland waterways (ADN)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	Not regulated	Not regulated	Not regulated	Not regulated
UN Proper shipping name	Not regulated	Not regulated	Not regulated	Not regulated
Transport hazard Class(es)	Not regulated	Not regulated	Not regulated	Not regulated
Packing group	Not regulated	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of Marpol and the IBC Code	Not regulated	Not regulated	Not regulated	Not regulated

Section 15 Regulatory information

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

Relevant information regarding authorization:

Not applicable.

Relevant information regarding restriction:

Not applicable.

Other EU regulations:

Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations:

Not applicable

15.2 Chemical safety assessment

YES

NO

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by (EU) 2015/830

16.2 Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by RoadRID:

Regulation for rail International transportation of Dangerous goods

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland WaterwaysIMDG:

Code international maritime dangerous goods code

ICAO: International Civil Aviation Organization

IATA: International Air Transport Association

LC50: median lethal concentration

EC50: The effective concentration of substance that causes 50% of the maximum response.

NOEC: No Observed Effect Concentration

DNEL: derived no-effect level

PNEC: predicted no-effect concentration

16.3 Key literature references and sources for data

ECHA Registered substances data

16.4 Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 2020/878

[CLP]

Classification according to Regulation (EC) No. 2020/878		Classification procedure
Skin Irrit. 2	H315	On basis of test data
Skin Sens. 1	H317	On basis of test data
Eye Irrit. 2	H319	On basis of test data
Repr. 1B	H360FD	On basis of test data

16.5 Relevant H-statements (number and full text):

H315: Causes skin irritation

H317: May cause an allergic skin reaction

H319: Causes serious eye irritation

H360FD: May damage fertility. May damage the unborn child.

16.6 Training instructions:

Not applicable.

16.7 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.8 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.