

SAFETY DATA SHEET

Revision date 2015-07-29

Revision number 1.01

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	BISOMER [®] HPMA
Product code	745771
Synonyms	Methacrylic acid, monoester with propane-1,2-diol

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

Recommended use [RU]	Monomer for special polymers
Uses advised against	Mixtures containing unreacted liquid monomer intended to come into contact with skin or nails

1.3 Details of the supplier of the safety data sheet

Supplier	GEO Specialty Chemicals UK Ltd Charleston Road, Hardley, Hythe Southampton, Hampshire SO45 3ZG United Kingdom Phone: +44 (0)23 80894666 Fax No: +44 (0)23 80243113
Responsibility Statement	For further information, please contact safety-data-sheet-fp@geosc.com

1.4 Emergency telephone number

Emergency telephone	24 Hour Emergency Phone Number GEO Specialty Chemicals UK Ltd +44 (0)23 80891806
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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

2.2 Label elements

**Signal word**

WARNING

Hazard statementsH317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation**Precautionary statements****Prevention**P262 - Do not get in eyes, on skin, or on clothing
P280 - Wear protective gloves/protective clothing/eye protection/face protection**Response**P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing**Hazard components for labeling**

Methacrylic acid, monoester with propane-1,2-diol

2.3 Other hazards which do not result in classification

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Component	Common name	CAS-No	weight-%
Methacrylic acid, monoester with propane-1,2-diol	Hydroxypropyl methacrylate (HYDROXYPROPYL METHACRYLATE)	27813-02-1	>= 97%

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

4. FIRST AID MEASURES

4.1 Description of first aid measures**General advice**

In case of adverse health effects seek medical advice.

Eye contact

Remove contact lenses, if worn. Immediately flush with plenty of water for at least 10 minutes, holding eyelids apart to ensure flushing of the entire surface. Seek medical advice immediately.

Skin contact

Wash off immediately with soap and plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Ingestion

If swallowed: Drink 1 or 2 glasses of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention. If vomiting should occur spontaneously, keep airway clear.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects	No information available.
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4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Water spray jet, Alcohol-resistant foam, Extinguishing powder, Carbon dioxide.
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Extinguishing media which must not be used for safety reasons	High pressure waterjet.
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5.2 Special hazards arising from the substance or mixture

Special Hazard	Formation of toxic gases is possible during heating or in fires. The product may undergo spontaneous polymerization at high temperatures. Polymerization is exothermic and may cause damage to the container and/or release of thermal decomposition products.
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5.3 Advice for firefighters

Special protective equipment for firefighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
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Firefighting measures	Cool exposed containers with water spray after extinguishing fire.
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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear suitable protective clothing and gloves.
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6.2 Environmental precautions

Environmental precautions	Do not empty into drains/surface water/ground water. Inform authorities in the event of product spillage to water courses or sewage systems.
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6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Clean up large spills with vacuum truck. Soak up small spills with inert absorbent material and place in a labeled waste container for disposal. Dispose of contaminated material as waste according to Section 13.
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6.4 Reference to other sections

See Section 12 for additional Ecological Information

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

Avoid contact with eyes, skin and clothing
Avoid breathing vapor or mist
Use only in well-ventilated areas
Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.
Wash thoroughly after handling
Ensure that eyewash stations and safety showers are close to the workstation location.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

The product is stabilized against spontaneous polymerization before delivery. However, if the permissible storage time or storage temperature are greatly exceeded the product may polymerize.
Keep only in the original container in a cool, well-ventilated place
Store at temperatures not exceeding 25 °C/ 77 °F
Store in a dry place
Store away from direct heat or sunlight.
Tanks should preferably contain no dead spaces where the product can be trapped and polymerize. Internal structural members should therefore be kept to a minimum and tanks should be welded.
Storage tank vents, especially those fitted with flame arrestors, should be inspected regularly for polymer fouling which can arise from vapor phase polymerization.
Do not store together with reductants.
Do not store together with oxidants.
Keep away from food, drink and animal feeding stuffs
Keep away from alkaline substances or other materials likely to initiate polymerization.

Materials to avoid

Reaction with reducing agents.
Reaction with oxidants.
Acids or alkalis.
Free radical producing initiators.
Primary and Secondary Amines.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit value

Component	Ministry of Labor (Republic of Korea, 3/2012)	ACGIH TLV
Methacrylic acid, monoester with propane-1,2-diol 27813-02-1	NAV	NAV

Legend

NAV - Not available

8.2 Appropriate engineering controls

Environmental exposure controls No information available

8.3 Personal Protective Equipment

Eye/face Protection

If splashes are likely to occur: Chemical Goggles.

Hand Protection

Polychloroprene gloves. Coating thickness 1.1 mm. Level 5 > 240 min breakthrough time.

Skin and body protection

Wear suitable protective clothing

Respiratory protection	Filter A2 is recommended in cases of prolonged exposure.
Other personal protection data	Eyewash fountains and safety showers must be easily accessible.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	liquid
Color	colorless
Odor	characteristic
Odor threshold	No information available
pH	No information available
Melting / freezing point	No information available
Boiling point / boiling range	209 °C / 408.2 °F - Differential Scanning Calorimetry
Flash point	111.0 °C / 231.8 °F - CC (closed cup)
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit	No information available
Lower flammability limit	No information available
Vapor pressure	0.11 hPa @ 20 °C - OECD Test No. 104
Vapor density	No information available
Specific gravity	No information available
Solubility(ies)	
Solubility (water)	130 g/L @ 25 °C - OECD Test No. 105
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	0.97 @ 20 °C - OECD Test No. 107
Autoignition temperature	355 °C / 671 °F @ 1020 hPa - Directive 84/449/EEC, A.15
Decomposition temperature	No information available
Viscosity	
Kinematic viscosity	8.90 mm ² /s @ 20 °C - OECD Test No. 114
Dynamic viscosity	No information available
Molecular weight	144 g/mol
Density	1.03 g/cm ³ - ASTM D 1298-99

10. STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity

Polymerizes readily unless inhibited. Polymerization is highly exothermic and, if not controlled, may be violent.

10.2 Chemical stability

Chemical stability

Stable under normal conditions of handling, use and transportation. Periodic air sparging in storage will assist long term stability.

10.3 Possibility of hazardous reactions

Hazardous polymerization

May occur if inhibitor is depleted or if exposed to high temperature.

10.4 Conditions to avoid

Conditions to avoid

This product contains a peroxidation inhibitor. To maintain inhibitor activity, oxygen must not be eliminated from the atmosphere above the product. Avoid radical forming substances (metal-ions, peroxides). Avoid heating. If prolonged excursions above the recommended storage temperature occur, then the rate of inhibitor depletion could accelerate, leading to an increased risk of polymerization. In these circumstances it is recommended that the inhibitor level be checked periodically using ASTM procedure D 3125, and more inhibitor added if depletion is observed.

10.5 Incompatible materials

Materials to avoid

Reaction with reducing agents. Reaction with oxidants. Acids or alkalies. Free radical producing initiators. Primary and Secondary Amines.

10.6 Hazardous decomposition products

Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Irritating vapors.

11. TOXICOLOGICAL INFORMATION

11.1 Information on likely routes of exposure

Acute health hazard

Inhalation

Inhalation of mist or vapor may cause respiratory tract irritation.

Eye contact

Causes eye irritation.

Skin contact

May cause an allergic skin reaction.

Ingestion

May be harmful if swallowed.

11.2 Health hazards

Acute toxicity - Product Information

Oral LD50

> 2,000 mg/kg
Method: OECD Test No. 401: Acute Oral Toxicity

Dermal LD50

> 5000 mg/kg body weight (Experiment)

Inhalation LC50	No information available
Skin corrosion/irritation	Not irritating Method: OECD Test No. 404: Acute Dermal Irritation/Corrosion
Serious eye damage/eye irritation	Irritating Method: OECD Test No. 405: Acute Eye Irritation/Corrosion
Sensitization	Dermal sensitization: sensitizing (Experiment)
Germ cell mutagenicity	No information available
Mutagenicity	Not mutagenic Method: OECD Test No. 471: Bacterial Reverse Mutation Test OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test
Carcinogenicity	No information available
Reproductive toxicity	Negative Method: OECD Test No. 422: Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test
Specific target organ toxicity - Single exposure	No information available
Specific target organ toxicity - Repeated exposure	No information available
Aspiration hazard	No information available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute aquatic toxicity

Fish	LC50 (48 hour): 493 mg/L Method: DIN 38412, Part 1
Crustacea	EC50 (48 hour) > 130 mg/L (<i>Daphnia magna</i>) Method: Acute daphnia toxicity according to test method OECD 202.
Bacteria toxicity	EC0 > 100 mg/L Method: DIN 38412, Part 27 (ROBRA Test, conforms with OECD 209)
Algae/aquatic plants	EC50 (72 hour) > 97.2 mg/L Method: OECD Test No. 201: Freshwater Alga and Cyanobacteria, Growth Inhibition Test

12.2 Persistence and degradability

Persistence and degradability	This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). (Expert assessment)
Ultimate biodegradation	Readily and rapidly degradable. All organic substances contained in the product achieve > 60% BOD/COD or CO ₂ liberation, or > 70% DOC reduction in tests for ease of degradability. Threshold values for 'readily degradable' (e.g. to OECD method 301) are reached.

12.3 Bioaccumulative potential

[Bioaccumulative potential](#)

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). (Expert assessment)

[12.4 Mobility in soil](#)[Mobility](#)

No information available

[12.5 Results of PBT and vPvB assessment](#)[PBT and vPvB assessment](#)

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)
This substance is not considered to be very persistent nor very bioaccumulating (vPvB)

[12.6 Other adverse effects](#)[Other information](#)

No other ecological studies have been carried out on this product.

13. DISPOSAL CONSIDERATIONS

[13.1 Waste treatment methods](#)[Disposal of wastes](#)

Dispose of according to regulations.

[Contaminated packaging](#)

Packaging that cannot be cleaned are to be disposed of in the same manner as the product. Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

[DOT \(US\)](#) Not regulated[14.1 UN number](#)[14.2 Proper shipping name](#)[14.3 Hazard class](#)[14.4 Packing group](#)[14.5 Environmental hazard](#)[Land transport \(ADR/RID\)](#) Not regulated[14.1 UN number](#)[14.2 Proper shipping name](#)[14.3 Hazard class](#)[14.4 Packing group](#)[14.5 Environmental hazard](#)[Inland waterway transport \(ADN\)](#) Not regulated[14.1 UN number](#)[14.2 Proper shipping name](#)[14.3 Hazard class](#)[14.4 Packing group](#)[14.5 Environmental hazard](#)[Air transport \(ICAO-TI / IATA-DGR\)](#) Not regulated[14.1 UN number](#)[14.2 Proper shipping name](#)[14.3 Hazard class](#)[14.4 Packing group](#)[14.5 Environmental hazard](#)[Sea transport \(IMDG\)](#) Not regulated[14.1 UN number](#)[14.2 Proper shipping name](#)

14.3 Hazard class**14.4** Packing group**14.5** Environmental hazard**14.6** Special precautions for user

No information available

15. REGULATORY INFORMATION**15.1** Industrial Safety and Health Law

ISHA Article 37

None of the components are listed.

ISHA Article 38

None of the components are listed.

Component	ISHA - Substances to be controlled - Acids and bases	ISHA - Substances to be controlled - Metals	ISHA - Substances to be controlled - Organic Substances
Methacrylic acid, monoester with propane-1,2-diol	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful factors subject to special health check-up - Acids and bases	ISHA - Harmful factors subject to special health check-up - Metals	ISHA - Harmful factors subject to special health check-up - Organic Substances
Methacrylic acid, monoester with propane-1,2-diol	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful agents subject to Work Environment Measuring - Acids and bases	ISHA - Harmful agents subject to Work Environment Measuring - Metals	ISHA - Harmful agents subject to Work Environment Measuring - Organic Substances
Methacrylic acid, monoester with propane-1,2-diol	Not applicable	Not applicable	Not applicable

Occupational exposure limits

See section 8 for more information

15.2 Toxic Chemicals Control Law

Component	TCCA - Toxic Chemicals	TCCA - Observational Chemicals	TCCA Article 32 (Banned)	TCCA Article 32 (Restricted)	Accident Precaution Chemicals
Methacrylic acid, monoester with propane-1,2-diol	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

15.3 Dangerous Substances Safety Management Act

Not classified

15.4 Wastes Management

Dispose of contents/container in accordance with all local, regional, national, and international regulations.

15.5 Other informationInternational Inventories

Australia (AICS)

All ingredients are on the inventory or exempt from listing

Canada (DSL)

All ingredients are on the inventory or exempt from listing

Canada (NDSL)

None of the ingredients are on the inventory.

[China \(IECSC\)](#)

All ingredients are on the inventory or exempt from listing

[EINECS \(European Inventory of Existing Chemical Substances\)](#)

All ingredients are on the inventory or exempt from listing

[ELINCS \(European List of Notified Chemical Substances\)](#)

None of the ingredients are on the inventory.

[ENCS \(Japan\)](#)

All ingredients are on the inventory or exempt from listing

[South Korea \(KECL\)](#)

All ingredients are on the inventory or exempt from listing

[Philippines \(PICCS\)](#)

All ingredients are on the inventory or exempt from listing

[TSCA \(United States\)](#)

All ingredients are on the inventory or exempt from listing

[Legend](#)

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - China Inventory of Existing Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

16. OTHER INFORMATION

[Product code](#) 745771

[Revision date](#) 2015-07-29

[Key or legend to abbreviations and acronyms used in the safety data sheet](#)

NAV - Not available

[Additional information](#)

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