SAFETY DATA SHEET

Revision date 2016-12-07 Revision number 1.03

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

1.1 Product identifier

Product name	BISOMER® IPGMA
Product code	5008170
Synonyms	Isopropylidene glycerol methacrylate

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

Recommended use [RU]	Monomer for special polymers
Uses advised against	None known

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

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Serious eye damage/eye irritation	Category 2

2.2 Label elements

Signal word	WARNING
Hazard statements	H319 - Causes serious eye irritation
Precautionary statements	
Prevention	Wash face, hands and any exposed skin thoroughly after handling Wear eye/face protection
Response	IF IN EYES: 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
Storage	None
Disposal	None

2.3 Other hazards which do not result in classification

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Component	Common name	CAS-No	weight-%
2-Propenoic acid, 2-methyl-[2,2-dimethyl-1, 3-dioxolan-4-yl] methyl ester	Isopropylidene glycerol methacrylate	7098-80-8	> 95%

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	Rinse immediately with plenty of running water (for 10 minutes). Seek medical advice immediately.
Skin contact	Rinse with running water and soap. If skin irritation occurs: Get medical advice/attention.
Ingestion	Rinse mouth with water, then drink one or two glasses of water.
Inhalation	Remove to fresh air.

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects	None known.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Water spray jet, Alcohol-resistant foam, Extinguishing powder, Carbon dioxide.
Extinguishing media which must not be used for safety reasons	High pressure waterjet.

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.

5.3 Advice for firefighters

Special protective equipment for firefighters	Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.
Firefighting measures	Cool exposed containers with water spray after extinguishing fire.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear suitable protective clothing and gloves.

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	Remove with liquid-absorbing material (sand, peat, sawdust). Dispose of contaminated material as waste according to Section 13.

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	Use only in well-ventilated areas 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 oxidants.
Do not store together with reductants.

Materials to avoid: Reaction with oxidants. Reaction with reducing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit value

Component	Ministry of Labor (Republic of Korea, 3/2012)	ACGIH TLV
2-Propenoic acid, 2-methyl-[2,2-dimethyl-1, 3-dioxolan-4-yl] methyl ester 7098-80-8	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: Tight sealing safety 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: Use only in well-ventilated areas. 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: < 10 °C / 50 °F

Boiling point / boiling range: > 110 °C / > 230 °F - ASTM D 1078-99

Flash point: > 100 °C / > 212 °F - ASTM D 92-97

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	No information available
Vapor density	No information available
Specific gravity	No information available
Solubility(ies)	
Solubility (water)	partially soluble
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Molecular weight	200 g/mol
Density	1.048 g/cm³ @ 20 °C - 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 oxidants. Reaction with reducing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products	Carbon oxides. Irritating vapors.

11. TOXICOLOGICAL INFORMATION

11.1 Information on likely routes of exposure

Acute health hazard

Inhalation	None known.
Eye contact	Irritating to eyes.
Skin contact	Non-irritating to the skin.
Ingestion	Low toxicity by this route.

11.2 Health hazards

Acute toxicity - Product Information

Oral LD50	> 2,000 mg/kg
Dermal LD50	No information available
Inhalation LC50	No information available
Skin corrosion/irritation	Not irritating
Serious eye damage/eye irritation	Causes serious eye irritation
Sensitization	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	No information available
Reproductive toxicity	No information available
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 - Product Information

Fish	No information available
Crustacea	No information available
Algae/aquatic plants	No information available

12.2 Persistence and degradability

Persistence and degradability	No information available

12.3 Bioaccumulative potential

Bioaccumulative potential	No information available

12.4 Mobility in soil

Mobility	No information available

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment	No information available

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	Waste incineration with the approval of the responsible local authority.
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

US DOT Not regulated
14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards

Land transport (ADR/RID) Not regulated
14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards

Inland waterway transport (ADN) Not regulated
14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards

Air transport (ICAO-TI / IATA-DGR) Not regulated
14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards

Sea transport (IMDG) Not regulated
14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group
14.5. Environmental hazards

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
2-Propenoic acid, 2-methyl-[2,2-dimethyl-1, 3-dioxolan-4-yl] methyl ester	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
2-Propenoic acid, 2-methyl-[2,2-dimethyl-1, 3-dioxolan-4-yl] methyl ester	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
2-Propenoic acid, 2-methyl-[2,2-dimethyl-1, 3-dioxolan-4-yl] methyl ester	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
2-Propenoic acid, 2-methyl-[2,2-dimethyl-1, 3-dioxolan-4-yl] methyl ester	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 information

International Inventories

Australia (AICS)
Some ingredients are not on the inventory.

Canada (DSL)
Some ingredients are not on the inventory.

Canada (NDSL)
Some ingredients are on the inventory.

China (IECSC)
Some ingredients are not on the inventory.

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)
Some ingredients are not on the inventory.

South Korea (KECL)
Some ingredients are not on the inventory.

Philippines (PICCS)
Some ingredients are not on the inventory.

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
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified 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	5008170
Revision date	2016-12-07

Key or legend to abbreviations and acronyms used in the safety data sheet
NAV - Not available

Additional information
BISOMER® is a registered trademark of GEO Specialty Chemicals UK Ltd.

Disclaimer
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