

1. IDENTIFICATION

Product Name	Hydroxypropyl Methacrylate (HPMA)
Other Names	MERACRYL® HPMA 98
Uses	Monomer; Chemical intermediate; Consumers/professional user. *Recommended restrictions: Applications where liquid monomer is intended to come into contact with skin or nails.
Chemical Family	No Data Available
Chemical Formula	C7H12O3
Chemical Name	2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.


Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled

Globally Harmonised System

Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
Hazard Categories	Serious Eye Damage/Irritation - Category 2B Sensitisation (Skin) - Category 1B		
Pictograms			
Signal Word	Warning		
Hazard Statements	H317	May cause an allergic skin reaction.	
	H320	Causes eye irritation.	
Precautionary Statements	Prevention	P280	Wear protective gloves.
		P261	Avoid breathing mist/vapours/spray.
		P272	Contaminated work clothing should not be allowed out of the workplace.
	Response	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
		P333 + P313	If skin irritation or rash occurs: Get medical advice.
		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.
		P362 + P364	Take off contaminated clothing and wash it before reuse.
	Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Hydroxypropyl methacrylate	C7H12O3	27813-02-1	>=98 - 100 %

4. FIRST AID MEASURES*Description of necessary measures according to routes of exposure*

Swallowed	IF SWALLOWED: Rinse mouth. Do not induce vomiting. Get immediate medical advice/attention. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs, get medical advice/attention. *Contaminated work clothing should not be allowed out of the workplace.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
Advice to Doctor	Symptomatic treatment. Medical treatment is necessary if symptoms occur which are obviously caused by skin or eye contact with the product or by inhalation of its vapours. First aider needs to protect themselves. First Aid responders should pay attention to self-protection and use the recommended protective clothing (see SECTION 8). *Most important symptoms and effects, both acute and delayed: Causes eye irritation. May cause an allergic skin reaction.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	Evacuate personnel to safe areas. Keep out unprotected persons. Move containers from fire area if you can do it without risk. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal.
Flammability Conditions	Combustible liquid; may burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Do not use high volume water jet. *Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire and Explosion Hazard	Containers may explode when heated. Take precautionary measures against static discharges. When heated above the flash point and/or during spraying (atomising), ignitable mixtures may form in air.
Hazardous Products of Combustion	Fire may produce irritating and/or toxic gases, including carbon monoxide, carbon dioxide, organic products of decomposition.
Special Fire Fighting Instructions	Prevent fire extinguishing water from contaminating surface water or the ground water system. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	111 °C [Pensky-Martens Closed Cup]
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	>=355 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Avoid breathing mist/vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Remove larger quantities mechanically (by pumping). Use explosion-proof equipment. Absorb smaller quantities and residues with earth, sand or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13).

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Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent product from getting into drains/surface water/groundwater.
Evacuation Criteria	Spill or leak area should be isolated immediately. Evacuate area. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8). *Use breathing apparatus if exposed to vapours/dust/mist/aerosol.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/aerosols and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). When heated above the flash point and/or during spraying (atomising), ignitable mixtures may form in air. Take precautionary measures against static discharges.
Storage	Store in a cool, dry and well-ventilated place. Protect from the action of light. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). *Keep at a temperature not exceeding 30 °C.
Container	Keep only in the original container. Fill the container by approximately 90 % only, as oxygen (air) is required for stabilisation. With large storage containers make sure the oxygen (air) supply is sufficient to ensure stability.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.
Exposure Limits	No Data Available
Biological Limits	No biological exposure limits noted for the ingredient(s).
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of high concentrations. Recommended: Organic vapour/particulate respirator (refer to AS/NZ 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Tightly fitting goggles; Face mask (on handling larger quantities). - Hand protection: Wear protective gloves. Recommended: Nitrile rubber; Butyl-rubber (suitable for spray protection). - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Chemical-resistant apron and boots.
Special Hazards Precautions	Avoid contact with the skin and eyes and inhalation of the product vapours.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands thoroughly with soap and water after handling. Take off contaminated clothing and wash it before reuse. Store work clothing separately. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Ester-like
Colour	Colourless

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pH	6.50 g/l (20 °C)
Vapour Pressure	0.11 hPa [OECD 104] (@ 20 °C)
Relative Vapour Density	>1 Air = 1
Boiling Point	209 °C [OECD 103]
Melting Point	No Data Available
Freezing Point	-90 °C
Solubility	130 g/l in water (25 °C) - Miscible with most organic solvents
Specific Gravity	1.03
Flash Point	111 °C [Pensky-Martens Closed Cup]
Auto Ignition Temp	>=355 °C
Evaporation Rate	Slower than Butyl acetate
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.03 g/cm ³
Specific Heat	No Data Available
Molecular Weight	144.2 g/mol
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Pow: 0.97 [Lit.]
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	20 °C
Viscosity	4.24 mm ² /s (@ 40 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	Heat of polymerisation: 50.7 kJ/mol
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible liquid; may burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating and/or toxic gases, including carbon monoxide, carbon dioxide, organic products of decomposition.
Release of Invisible Flammable Vapours and Gases	When heated above the flash point and/or during spraying (atomising), ignitable mixtures may form in air.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	The product is normally supplied in a stabilised form. If the permissible storage period and/or storage temperature is exceeded, the product may polymerise with heat evolution.

Conditions to Avoid	Protect from the action of light. Keep away from heat and sources of ignition. Take precautionary measures against static discharges.
Materials to Avoid	Incompatible/reactive with peroxides, amines, sulfur compounds, heavy metal ions, alkalis, reducing agents and oxidising agents, free radical initiators, mineral acids.
Hazardous Decomposition Products	No decomposition if used as directed. Fire/decomposition may produce irritating and/or toxic gases, including carbon monoxide, carbon dioxide, organic products of decomposition.
Hazardous Polymerisation	Polymerisation with heat evolution may occur in the presence of radical forming substances (e.g. peroxides), reducing substances and/or heavy metal ions.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on toxicological effects:</p> <ul style="list-style-type: none"> - Acute toxicity: The substance is rapidly metabolised. Not classified for acute toxicity based on available data. - Skin corrosion/irritation: Not irritating (Rabbit, 24 h) [FDA 1959 Draize]. - Eye damage/irritation: Causes eye irritation. Moderate irritant (Rabbit) [Draize Test]. - Respiratory sensitisation: In animal experiments, the substance shows low-no ability as a resp. sensitizer (Guinea pig). - Skin sensitisation: May cause an allergic skin reaction. There are indications of a sensitising effect of the substance in man. - Germ cell mutagenicity: Based on available data, the classification criteria are not met. - Carcinogenicity: Based on available data, the classification criteria are not met. - Reproductive toxicity: Animal experiments give no indications of reproduction-toxic effects. - STOT (single exposure): Based on available data, the classification criteria are not met. - STOT (repeated exposure): Based on available data, the classification criteria are not met. - Aspiration toxicity: No aspiration toxicity classification. <p>Information on likely routes of exposure:</p> <ul style="list-style-type: none"> - Ingestion: If handled correctly, not a relevant route of exposure. - Eye contact: May irritate eyes. Eye may become red, tear and become painful. - Skin contact: Prolonged skin contact may cause redness and irritation. Prolonged or repeated contact may cause skin sensitisation in susceptible individuals. - Inhalation: Not toxic after single exposure. <p>Chronic effects: No information available.</p>
Acute	
Ingestion	<p>Acute toxicity (Oral):</p> <ul style="list-style-type: none"> - LD50, Rat: >2,000 mg/kg [Limit test; no evidence for hazardous properties].
Other	<p>Acute toxicity (Dermal):</p> <ul style="list-style-type: none"> - LD50, Rabbit: >5,000 mg/kg
Chronic	
Ingestion	<p>Repeated dose toxicity (Oral):</p> <ul style="list-style-type: none"> - NOAEL, Rat: 300 mg/kg (49 day).
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	<p>Aquatic toxicity:</p> <ul style="list-style-type: none"> - LC50, Fish (<i>Oryzias latipes</i>): >100 mg/l (96 h). - EC50, Invertebrates (<i>Daphnia magna</i>): >143 mg/l (48 h). - EC50, Algae/aquatic plants (<i>Pseudokirchneriella subcapitata</i>): >97.2 mg/l (72 h) [OECD 201]. - NOEC, Invertebrates (<i>Daphnia magna</i>): 45.2 mg/l (21 d) [OECD 202]. - NOEC, Algae/aquatic plants (<i>Pseudokirchneriella subcapitata</i>): 97.2 (72 h) [OECD 201].
Persistence/Degradability	<p>Readily biodegradable (81 %, 28 d) [OECD 301 C].</p> <p>*Photochemical degradation (air) takes place.</p>
Mobility	Very sparingly volatile from the aqueous phase. Binding to the solid soil phase, sediment or clarification sludge is not

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expected. The substance is distributed mainly into the water phase and the soil.

Environmental Fate	Prevent substance from entering soil, natural bodies of water and sewer systems.
Bioaccumulation Potential	Accumulation in organisms is not expected (log Kow: 0.97).
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of waste and residues in accordance with local authority requirements. Waste is hazardous. It must be disposed of in accordance with the regulations after consultation of the competent local authorities and the disposal company in a suitable and licensed facility.
Special Precautions for Land Fill	Contaminated packaging can be recycled after decontamination. Packaging that cannot be cleaned should be disposed of professionally.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Hydroxypropyl Methacrylate (HPMA)
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	Hydroxypropyl Methacrylate (HPMA)
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Hydroxypropyl Methacrylate (HPMA)
Class	No Data Available

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Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (United States of America)

US DOT

Proper Shipping Name	Hydroxypropyl Methacrylate (HPMA)
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Hydroxypropyl Methacrylate (HPMA)
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Hydroxypropyl Methacrylate (HPMA)
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

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Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information

No Data Available

Poisons Schedule (Aust)

Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code

HSR002503 - Additives, Process Chemicals and Raw Materials (Subsidiary Hazard) Group Standard 2020

National/Regional Inventories

Australia (AIIIC)

Listed

Canada (DSL)

Not Determined

Canada (NDSL)

Not Determined

China (IECSC)

Not Determined

Europe (EINECS)

Not Determined

Europe (REACH)

Not Determined

Japan (ENCS/METI)

Not Determined

Korea (KECI)

Not Determined

Malaysia (EHS Register)

Not Determined

New Zealand (NZIoC)

Listed

Philippines (PICCS)

Not Determined

Switzerland (Giftliste 1)

Not Determined

Switzerland (Inventory of Notified Substances)

Not Determined

Taiwan (NCSR)

Not Determined

USA (TSCA)

Not Determined

16. OTHER INFORMATION

Related Product Codes

HYPRME1000, HYPRME2000, HYPRME3000, HYPRME3001, HYPRME8000, HYPRME8010

Revision

4

Revision Date

09 Jan 2023

< Less Than

Key/Legend

> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO₂ Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight