



Safety Data Sheet
GPTA EM2387 - Low Viscosity
Revision 3, Date 02 Jul 18

1. IDENTIFICATION

Product Name	GPTA EM2387 - Low Viscosity
Other Names	EM2387/G3.5POTA; Glycerol propoxylate triacrylate; Propoxylated glycerol triacrylate; Propoxylated glyceryl triacrylate
Uses	UV Coatings, inks, adhesives, photoresists.
Chemical Family	No Data Available
Chemical Formula	UVCB
Chemical Name	Glycerol, propoxylated, esters with acrylic acid
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 2A Sensitisation (Skin) - Category 1	
Pictograms			
Signal Word		Warning	
Hazard Statements		H319	Causes serious eye irritation.
		H317	May cause an allergic skin reaction.
Precautionary Statements	Prevention	P280	Wear protective gloves/eye protection/face protection.
		P261	Avoid breathing mist/vapours/spray.
		P272	Contaminated work clothing should not be allowed out of the workplace.
	Response	P337 + P313	If eye irritation persists: Get medical advice/attention.
		P302 + P352	IF ON SKIN: Wash with plenty of water/...
		P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
		P363	Wash contaminated clothing before reuse.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	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)
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Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Health Hazards	6.1E	Substances that are acutely toxic –May be harmful, Aspiration hazard
		6.3A	Substances that are irritating to the skin
		6.4A	Substances that are irritating to the eye

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Propoxylated glyceryl triacrylate	UVCB	52408-84-1	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink 1 - 2 glasses of (lukewarm) water. Do not induce vomiting. Call a Poison Centre or doctor/physician for advice if a large quantity is swallowed or if you feel unwell. 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: Remove contaminated clothing and shoes immediately. Flush skin with (lukewarm) running water for at least 15 minutes; Wash with plenty of (mild) soap and water. If skin irritation or rash occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing; Administer oxygen if breathing is difficult. Keep victim calm and warm - Obtain immediate medical care - Prompt action is essential.
Advice to Doctor	Treat symptomatically. Symptoms may be delayed. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	May cause an allergic skin reaction, in susceptible individuals upon repeated exposure.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	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 water jets.
Fire and Explosion Hazard	High temperatures, inhibitor depletion, accidental impurities or exposure to radiation or oxidizers may cause spontaneous polymerizing reaction, generating heat/pressure. Closed containers may rupture or explode during runaway polymerization.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive fumes, including acrid smoke, Carbon monoxide, Carbon dioxide.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	>110 °C [Closed cup]
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Absorb with earth, sand or other non-combustible material and transfer to a suitable, vented container for disposal (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Large spill: Dike and recover.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent entry into soils, drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Large spill: Obtain emergency help by fire or emergency unit.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

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 and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Avoid high temperatures and keep away from ignition sources - No smoking. If material freezes, heat and mix to redistribute the inhibitor; Product may also be heated to facilitate handling. Heat product container slowly to 40 °C for not more than 24 hours. Convection ovens or warm water bath are recommended for heating (due to more efficient heat transfer); Do not use localised heat sources (e.g. drum or band heaters). An air space, preferably an air bubble flow, should be provided for at all times during heating.
Storage	Store drums in a cool (above 10 °C and below 32 °C), dry and well-ventilated place. Protect from direct sunlight/UV radiation. Prevent material from freezing (inhibitor can separate from product as a solid). Keep away from heat (high temperatures) and sources of ignition - No smoking. Keep away from incompatible materials and other initiators (see SECTION 10). Use product within six months of receipt for optimum results. - Bulk storage temperature range: 15 - 27 °C
Container	Keep only in the original container. This product is inhibited to prevent uncontrolled polymerisation. A polymerisation reaction can generate heat and pressure and may cause product container to rupture. Check inhibitor content often and add inhibitor to bulk liquid if needed. Maintain head space in storage containers to support oxygen requirements of the inhibitor(s). Do not blanket or mix with oxygen free (inert) gas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No value assigned for this specific material by Safe Work Australia.
Exposure Limits	No Data Available
Biological Limits	No information available.
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. Using local exhaust ventilation and closed processing system for mass production. Use explosion-proof electrical/ventilating/lighting equipment.
Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: Wear respiratory protection if handling this material at elevated temperatures or under mist forming conditions. Recommended: Organic vapour/particulate respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical splash goggles; Face-shield in case of possible splashing or spraying, airborne particles/vapours. Contact lenses should NOT be worn. - Hand protection: Wear protective gloves. Recommended: Nitrile gloves (for product without solvents added); Thick (>0.5 mm) Nitrile gloves (for product used with solvents). Do NOT use natural rubber gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Apron, boots, head and face protection, depending on the conditions of use.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove contaminated clothing and shoes immediately and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Mild
Colour	Clean, clear
pH	~6.8 - 7.2
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	>100 °C
Melting Point	No Data Available

Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	1.08 - 1.11
Flash Point	>110 °C [Closed cup]
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.08 - 1.11 g/cm3
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	70 - 100 cps (@ 25 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
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	May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including acrid smoke, Carbon monoxide, Carbon dioxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	This product is inhibited to prevent uncontrolled polymerisation.
Chemical Stability	Stable on normal condition.
Conditions to Avoid	Avoid high temperatures, localised heating and sources of ignition. Protect from direct sunlight/UV radiation. Prevent material from freezing. Avoid oxidising conditions and inert gas blanketing.
Materials to Avoid	Incompatible/reactive with strong oxidisers, strong reducers, free radical initiators, inert gases, oxygen scavengers.
Hazardous Decomposition Products	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including acrid smoke, Carbon monoxide, Carbon dioxide.
Hazardous Polymerisation	High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidisers may cause spontaneous (runaway) polymerising reaction, generating heat/pressure.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: This material is expected to be a slight ingestion hazard.
- Skin corrosion/irritation: This material is expected to be a skin irritant; Symptoms may include localised redness or rash and swelling of the affected area. Symptoms may be delayed. A more severe skin response may occur after prolonged contact with this material.
- Eye damage/irritation: Cause serious eye irritation, with symptoms including burning sensation, tearing, redness or swelling.
- Respiratory/skin sensitisation: May cause an allergic skin reaction, in susceptible individuals upon repeated exposure.
- Germ cell mutagenicity: No information available.
- Carcinogenicity: No information available.
- Reproductive toxicity: No information available.
- STOT (single exposure): No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions due to the low volatility of this material. However, aerosols or vapours which may be generated at elevated processing temperatures, may cause respiratory tract irritation; Symptoms may include coughing, mucous production and shortness of breath.
- STOT (repeated exposure): No information available.
- Aspiration toxicity: No information available.

Carcinogen Category

None

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Aquatic toxicity:

- Acute LC50, Freshwater fish (zebra fish): 5.74 mg/L (96 h) [OECD 203].
- Acute EC50, Freshwater invertebrates/daphnia: 91.4 mg/L (48 h) [OECD 202].
- Acute EC50, Freshwater algae (Desmodesmus subspicatus): 12.2 mg/L (72 h) [OECD 201].

Persistence/Degradability

Readily biodegradable.

Mobility

Low absorption potential; low mobility in soil/sediment.

Environmental Fate

Prevent entry into soils, drains and waterways.

Bioaccumulation Potential

Low potential for bioaccumulation.

Environmental Impact

No Data Available

13. DISPOSAL CONSIDERATIONS**General Information**

Dispose of residues and spilled material as hazardous waste (due to potential for internal heat generation) and in accordance with local/regional/national regulations.

Special Precautions for Land Fill

Contaminated packaging: Since the emptied containers retain product residue, follow label warnings even after container is emptied. The container can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture or weld on or near this container.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name

GPTA EM2387 - Low Viscosity

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	GPTA EM2387 - Low Viscosity
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	GPTA EM2387 - Low Viscosity
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 (United States of America)

US DOT

Proper Shipping Name	GPTA EM2387 - Low Viscosity
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	GPTA EM2387 - Low Viscosity
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

GPTA EM2387 - Low Viscosity

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)

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

HSR003630

National/Regional Inventories**Australia (AIC)**

Listed

Canada (DSL)

Listed

Canada (NDSL)

Not Determined

China (IECSC)

Listed

Europe (EINECS)

500-114-5

Europe (REACH)

Not Determined

Japan (ENCS/METI)

Not Determined

Korea (KECI)

Listed

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)	Listed

16. OTHER INFORMATION

Related Product Codes	MONOME1000, MONOME1001, MONOME1002, MONOME1100
Revision	3
Revision Date	02 Jul 2018
Key/Legend	<p> < Less Than > 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 </p>

TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight