



Safety Data Sheet
Epoxy Acrylate Oligomers in TPGDA
Revision 4, Date 25 Apr 18

1. IDENTIFICATION

Product Name	Epoxy Acrylate Oligomers in TPGDA
Other Names	ETERCURE 624A-75
Uses	UV coatings and inks.
Chemical Family	No Data Available
Chemical Formula	Unspecified
Chemical Name	Contains: Epoxy diacrylate; Tripropylene glycol diacrylate
Product Description	Bisphenol A epoxy acrylate diluted in 25% TPGDA.

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

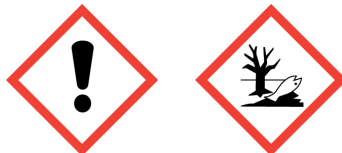
Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System



Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation - Category 2A Sensitisation (Skin) - Category 1 Specific Target Organ Toxicity (Single Exposure) - Category 3 Long-term Hazard To The Aquatic Environment - Category 2

Pictograms



Signal Word

Warning

Hazard Statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention	P280 Wear protective gloves/eye protection/face protection. P261 Avoid breathing mist/vapours/spray. P273 Avoid release to the environment.
Response	P272 Contaminated work clothing should not be allowed out of the workplace. P302 + P352 IF ON SKIN: Wash with plenty of water and soap. P337 + P313 If eye irritation persists: Get medical advice. P333 + P313 If skin irritation or rash occurs: Get medical advice. P312 Call a POISON CENTER or doctor if you feel unwell. P391 Collect spillage. P362 Take off contaminated clothing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	P304 + P340 IF INHALED: Remove victim to fresh air and keep comfortable for breathing. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
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)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications

Health Hazards	6.3A Substances that are irritating to the skin 6.4A Substances that are irritating to the eye 6.5B Substances that are contact sensitisers
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Environmental Hazards **9.1B**

Substances that are ecotoxic in the aquatic environment

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

Chemical Entity	Formula	CAS Number	Proportion
Epoxy Diacrylate	Unspecified	55818-57-0	75 %
Tripropylene Glycol Diacrylate (TPGDA)	Unspecified	42978-66-5	25 %

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

Swallowed	IF SWALLOWED: Rinse mouth, then drink about 450 mL (lukewarm) water. Call a Poison Centre or doctor/physician for advice if a large amount is swallowed or if you feel unwell. Do NOT induce vomiting. Keep victim calm and warm - Obtain immediate medical care. 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 20 - 30 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 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 if experiencing respiratory symptoms or if you feel unwell. 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 identity and nature of product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	No information available.

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	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 water jets.
Fire and Explosion Hazard	High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidisers may cause spontaneous polymerisation reaction, generating heat/pressure. Closed containers may rupture or explode during runaway polymerisation.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive fumes, including Carbon monoxide, Carbon dioxide, acrid smoke; other toxic vapours may be released.
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	>100 °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 mist/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 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	Ventilate area and wash spill site after material pickup is complete.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8). Large spill: Wear SCBA and chemical splash suit.

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation - Use only outdoors or in a well-ventilated place. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours and contact with eyes, skin and clothing. Product may be heated to facilitate handling. Heat product container slowly to 40 °C for not more than 24 hours. Convection ovens or warm water bath (preferred due to more efficient heat transfer) are recommended for heating. Do not use drum heater. An air space, preferably an air bubble flow, should be provided at all times during heating.
Storage	Store drums away from heat sources, strong oxidisers, radiation and other initiators. Do not blanket or mix with oxygen free gas, and prevent material from freezing (inhibitor can separate from product as a solid). Store drums above 10 °C and below 32 °C; Bulk storage temperature range: 15 - 27 °C. Use product within six months of receipt for optimum results. If material freezes, heat and mix to redistribute the inhibitor.
Container	Keep only in the original container. This product is inhibited to prevent uncontrolled polymerisation - Polymerisation 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).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product.
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. Use explosion-proof electrical/ventilating/lighting equipment.
Personal Protection Equipment	<ul style="list-style-type: none"> - Respiratory protection: If this material is handled at elevated temperatures or under mist forming conditions, approved respiratory protection equipment should be used (refer to AS/NZS 1715 & 1716). - Eye/face protection: Eye protection, such as chemical splash goggles and/or face shield, must be worn when possibility exists for eye contact. Contact lenses should NOT be worn. - Hand protection: Wear protective gloves. Do not use natural rubber gloves. Wear nitrile gloves; For products used with solvents, wear thick (>0.5 mm) nitrile gloves. Replace gloves immediately when torn or any change in appearance is noticed. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Depending on the conditions of use, protective gloves, apron, boots, head and face protection should be worn. This equipment should be cleaned thoroughly after each use.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid
Odour	Low, monomer odour
Colour	No information available.
pH	No Data Available
Vapour Pressure	No Data Available
Relative Vapour Density	<1 Air = 1
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Negligible solubility in water - Soluble in acetone (>30 g/20 g @ 20 °C)
Specific Gravity	1.15
Flash Point	>100 °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	1.15 g/cm ³
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	No Data Available
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	Combustible liquid; May burn but does not ignite readily.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon monoxide, Carbon dioxide, acrid smoke; other toxic vapours may be released.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	This product is inhibited to prevent uncontrolled polymerisation - Polymerisation can generate heat and pressure and may cause product container to rupture.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Keep away from high temperatures, localised heat sources (i.e. drum or band heaters), oxidising conditions and inert gas blanketing. Protect from freezing, direct sunlight and UV radiation.
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 Carbon monoxide, Carbon dioxide, acrid smoke; other toxic vapours may be released.
Hazardous Polymerisation	High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidisers may cause spontaneous polymerisation reaction, generating heat/pressure.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on possible routes of exposure:</p> <ul style="list-style-type: none"> - Eye contact: This material is expected to cause (moderate) eye irritation, with symptoms including burning sensation, tearing, redness or swelling. - Ingestion: This material is expected to be a slight ingestion hazard. - Inhalation: No significant signs or symptoms of adverse health effects 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 of irritation may include coughing, mucous production and shortness of breath. - Skin contact: This material is expected to be a skin irritant and may cause an allergic skin reaction (sensitisation) in susceptible individuals upon repeated exposure. Symptoms of irritation may include redness or rash, swelling of the affected area and blistering. Repeated or prolonged skin contact may cause a more severe skin response such as ulcers and scarring. Symptoms of skin exposure may be delayed 24 - 48 hours.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container as hazardous waste and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Contaminated packaging: The container for this product 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. Since the emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Epoxy Acrylate Oligomers in TPGDA
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	AU01
Comments	Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs.

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Tripropylene glycol diacrylate)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Tripropylene glycol diacrylate)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Tripropylene glycol diacrylate)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Tripropylene glycol diacrylate)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3028
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-F
Marine Pollutant	Yes

Air Transport

IATA DGR

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Tripropylene glycol diacrylate)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3082
Hazchem	3Z
Pack Group	III
Special Provision	No Data Available

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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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	HSR005330
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National/Regional Inventories

Australia (AIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed

Europe (EINECS)	Listed
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)	Not Determined

16. OTHER INFORMATION

Related Product Codes	EPACRY1001, EPACRY1100, EPACRY2500, EPACRY2501, EPACRY2510, EPACRY3000, EPACRY5200, EPACRY8000
Revision	4
Revision Date	25 Apr 2018
Reason for Issue	SDS Updated
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. </p>

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 Health 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