ERAPOL EME215/60 POLYOL

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
ERAPOL EME215/60 POLYOL

PRODUCT USE
Used according to manufacturer's directions.
Polyurethane polyol curative

SUPPLIER
Company: Era Polymers Pty Ltd
Address:
25- 27 Green Street, Banksmeadow, NSW 2019, Australia

Telephone: +61 2 9666 3788
Emergency Tel:**1800 039 008 (AUS)**
Emergency Tel:**+80024362255 (INTL)**
Fax: +61 2 9666 4805
Email: erapol@erapol.com.au
Website: ~

Section 2 - HAZARDS IDENTIFICATION

GHS Classification
Chronic Aquatic Hazard Category 4

EMERGENCY OVERVIEW

HAZARD

Determined by Chemwatch using GHS criteria

H413	May cause long lasting harmful effects to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention

Code	**Phrase**
P273	Avoid release to the environment.

Disposal

Code	**Phrase**
P501	Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
1, 4- butylene glycol	110-63-4	<10
bis(phenylmercury) dodecenylsuccinate	27236-65-3	<0.1
All other substances non hazardous to 100%		

continued...

Section 4 - FIRST AID MEASURES

SWALLOWED
• Immediately give a glass of water.
• First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE
■ If this product comes in contact with eyes:
• Wash out immediately with water.
• If irritation continues, seek medical attention.
• Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
■ If skin or hair contact occurs:
• Flush skin and hair with running water (and soap if available).
• Seek medical attention in event of irritation.

INHALED
• If fumes, aerosols or combustion products are inhaled remove from contaminated area.
• Other measures are usually unnecessary.

NOTES TO PHYSICIAN
Treat symptomatically.
For acute and short term repeated exposures to aryl and alkylmethoxy compounds of mercury: Absorption proceeds more rapidly than its inorganic counterpart but once inside the body biotransformation releases inorganic mercury. [Ellenhorn and Barceloux: Medical Toxicology].
• Moderate adsorption of inorganic mercury compounds through the gastro-intestinal tract (7-15%) is the principal cause of poisoning. These compounds are highly concentrated (as the mercuric (Hg (2+) form) in the kidney; acute ingestion may lead to oliguric renal failure. Severe mucosal necrosis may also result from ingestion.
• Chronic effects range from proteinuria to nephrotic syndrome. Chronic presentation also involves dermatitis, gingivitis, stomatitis, tremor and neuropsychiatric symptoms of erethism.
• Absorbed inorganic mercury does not significantly cross the blood-brain barrier.
• Emesis and lavage should be initiated following acute ingestion.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
• There is no restriction on the type of extinguisher which may be used.
• Use extinguishing media suitable for surrounding area.

FIRE FIGHTING
• Use water delivered as a fine spray to control fire and cool adjacent area.
• Do not approach containers suspected to be hot.
• Cool fire exposed containers with water spray from a protected location.
• If safe to do so, remove containers from path of fire.

FIRE/EXPLOSION HAZARD
• Non combustible.
• Not considered a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY
■ None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
• Clean up all spills immediately.
• Avoid breathing vapours and contact with skin and eyes.
• Control personal contact with the substance, by using protective equipment.
• Contain and absorb spill with sand, earth, inert material or vermiculite.

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MAJOR SPILLS
• Clear area of personnel and move upwind.
• Alert Fire Brigade and tell them location and nature of hazard.
• Control personal contact with the substance, by using protective equipment.
• Prevent spillage from entering drains, sewers or water courses.
Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING
• Limit all unnecessary personal contact.
• Wear protective clothing when risk of exposure occurs.
• Use in a well-ventilated area.
• Avoid contact with incompatible materials.

SUITABLE CONTAINER
• Polyethylene or polypropylene container.
• Packing as recommended by manufacturer.
• Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY
Avoid contamination of water, foodstuffs, feed or seed.
• WARNING: Avoid or control reaction with peroxides. All transition metal peroxides should be considered as potentially explosive. For example transition metal complexes of alkyl hydroperoxides may decompose explosively.
• The pi-complexes formed between chromium(0), vanadium(0) and other transition metals (haloarene-metal complexes) and mono-or poly-fluorobenzene show extreme sensitivity to heat and are explosive.
• Avoid reaction with borohydrides or cyanoborohydrides.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS
The following materials had no OELs on our records
• 1, 4- butylene glycol: CAS:110- 63- 4 CAS:74829- 49- 5 CAS:38274- 25- 8
• bis(phenylmercury) dodecenylsuccinate: CAS:27236- 65- 3

MATERIAL DATA
BIS(PHENYLMERCURY) DODECENYLSUCCINATE:
ERAPOL EME215/60 POLYOL:

1,4-BUTYLENE GLYCOL:
Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations.

BIS(PHENYLMERCURY) DODECENYLSUCCINATE:
It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.
At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience).
NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.
Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.

PERSONAL PROTECTION

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RESPIRATOR
•Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE
• Safety glasses with side shields
• Chemical goggles.
• Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent].

HANDS/FEET
■ Wear general protective gloves, eg. light weight rubber gloves.
The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:.
WARNING: Do NOT use latex or PVC gloves
• In 1997, a researcher (Dr. Karen E. Wetterhahn) died from organic mercury poisoning, resulting from a single exposure to dimethylmercury almost a year before.
• Heavy metals and organic metal compounds, in particular, have posed special hazards in worker protection. At the time of diagnosis and before she lapsed into a vegetative state, Dr. Wetterhahn asked that her case be made known to others.
Permeation testing of the potential of transdermal exposure to dimethylmercury produced the following results*.

Glove material	Thickness in mm*	Breakthrough Time
Nitrile	0.2	0.25 minutes
Neoprene	0.8	<10 mins.
Butyl	0.33	<15 mins.
Viton	0.28	<15 mins.
Silver Shield	0.13	>240 mins.
Silver Shield & Neoprene Pair	0.7	>240 mins.

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OTHER
■ No special equipment needed when handling small quantities.
OTHERWISE:
• Overalls.
• Barrier cream.
• Eyewash unit.

ENGINEERING CONTROLS
■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
Liquid.

State	Liquid	Molecular Weight	Not Available

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Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Not Available
Flash Point (°C)	Not Available	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Available
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.2
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY
■ Product is considered stable and hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

Health hazard summary table:

Acute toxicity	Not applicable
Skin corrosion/irritation	Not applicable
Serious eye damage/irritation	Not applicable
Respiratory or skin sensitization	Not applicable
Germ cell mutagenicity	Not applicable
Carcinogenicity	Not applicable
Reproductive toxicity	Not applicable
STOT- single exposure	Not applicable
STOT- repeated exposure	Not applicable
Aspiration hazard	Not applicable

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ Swallowing 1,4-butylene glycol may cause central nervous system depression characterised by headache, dizziness, drowsiness, nausea, vomiting, abdominal pain and inco-ordination. Severe over-exposure may lead to coma and possible death, due to failure of breathing. Ingestion may also cause kidney damage and peripheral neuropathy, a progressive disorder of the nervous system characterised by sensory and motor abnormalities, muscle spasms, weakness and pain in the arms and legs, numbness and tingling of the fingers and toes and paralysis.
■ Gamma-hydroxybutyric acid readily crosses the blood-brain barrier and may cause relaxation, loss of muscle tone and reduced inhibition at low doses, then at higher levels, drowsiness, speech and motor interference, increased libido and reduced rate of breathing, heart rate and blood pressure. There may be low blood potassium, twitching and seizures, nausea, vomiting, hallucinations, delirium and coma. The effects are enhanced with alcohol. It can be addictive with sustained use. Withdrawal symptoms may occur on discontinuation after 24 hours of repeated use and include anxiety, sleeplessness, tremors, fast heart rate, delirium and agitation. These may occur within 1 to 6 hours of the last dose but may last for many months.
■ The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (eg. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

EYE
■ Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN
■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

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INHALED
■ The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS
Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.
Gamma-butyrolactone is rapidly converted to gamma-hydroxybutyric acid by enzymes in the blood and liver. It has been linked with increasing incidence of kidney and adrenal gland tumors.
There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.

TOXICITY AND IRRITATION
~OTHER
■ No significant acute toxicological data identified in literature search.

SKIN

1, 4- butylene glycol	GESAMP/EHS Composite List - GESAMP Hazard Profiles	D1: skin irritation/corrosion	0

Section 12 - ECOLOGICAL INFORMATION

May cause long-term adverse effects in the aquatic environment.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
1, 4- butylene glycol	HIGH	No Data Available	LOW	HIGH
bis(phenylmercury) dodecenylsuccinate	No Data Available	No Data Available	No Data Available	No Data Available

Section 13 - DISPOSAL CONSIDERATIONS

■ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.
A Hierarchy of Controls seems to be common - the user should investigate:
• Reduction.
• DO NOT allow wash water from cleaning or process equipment to enter drains.
• It may be necessary to collect all wash water for treatment before disposal.
• In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
• Where in doubt contact the responsible authority.
• Recycle wherever possible.
• Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
• Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).
• Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:
None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, IATA, IMDG

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Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

Regulations for ingredients

1, 4-butylene glycol (CAS: 110-63-4, 74829-49-5, 38274-25-8) is found on the following regulatory lists;
"Acros Transport Information", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "OECD List of High Production Volume (HPV) Chemicals", "Sigma-AldrichTransport Information"

bis(phenylmercury) dodecenylsuccinate (CAS: 27236-65-3) is found on the following regulatory lists;
"OSPAR List of Chemicals for Priority Action", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments"

No data for ERAPOL EME215/60 POLYOL (CW: 9-49863)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
1, 4- butylene glycol	110- 63- 4	Mut3; R68 Xn; R22

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
1,4-butylene glycol	110-63-4, 74829-49-5, 38274-25-8

■ Classification of the preparation and its individual components has drawn on official and authoritative sources using available literature references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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