

EME215/40A POLYOL



Version 1
Erapol Co. Material Safety Data Sheet (Conforms to Reg. (EC) No 1907/2006, Reg. (EC) No 1272/2008 and their amendments)

Erapol Co.9-31399
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SAFETY DATA SHEET

SECTION 1: Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name: EME215/40A POLYOL
Chemical product name: No data available
Synonyms: No data available
Proper shipping name: None
Chemical formula: No data available
Other means of identification: No data available
Index number: No data available
ID number: No data available
CAS number: No data available
REACH registration number: No data available
EC number: Not Available

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

Relevant identified uses: Used according to manufacturer's directions. Polyol component
Uses advised against: No data available

1.3. Details of the supplier of the safety data sheet

Registered company name: Era Polymers Pty Ltd
Address: 25-27 Green Street, Banksmeadow, NSW 2019, Australia
Telephone: +61 2 9666 3788
Fax: +61 2 9666 4805
Email: erapol@erapol.com.au
Website:

1.4. Emergency telephone number

Association / Organisation:
Other emergency telephone numbers: 1800 039 008 (AUS)
Other emergency telephone numbers: +80024362255 (INTL)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

DSD classification: In case of mixtures, classification has been prepared by following DPD (Directive 1999/45/EC) or CLP (Regulation (EC) No 1272/2008) regulations
DSD classification (additional): No data available
DPD classification:
R20/21/22 • Harmful by inhalation, in contact with skin and if swallowed.
R33 • Danger of cumulative effects.
R53 • May cause long-term adverse effects in the aquatic environment.

CLP classification:
Chronic Aquatic Hazard Category 4
Acute Toxicity (Oral) Category 4
Acute Toxicity (Dermal) Category 4
Acute Toxicity (Inhalation) Category 4
STOT - RE Category 2

CLP classification (additional): No data available

2.2. Label elements

CLP label elements



Signal word: WARNING
Hazard statement(s):
H413 May cause long lasting harmful effects to aquatic life.
H302 Harmful if swallowed

H312	Harmful in contact with skin
H332	Harmful if inhaled
H373	May cause damage to organs through prolonged or repeated exposure.

Determined by Chemwatch using CLP criteria

Additional Statement(s):	No data available																																				
Supplementary statement(s):	No data available																																				
Precautionary statement(s):	<table> <tr> <th>Prevention Code</th><th>Phrase</th></tr> <tr> <td>P260</td><td>Do not breathe dust/fume/gas/mist/vapours/spray.</td></tr> <tr> <td>P261</td><td>Avoid breathing dust/fume/gas/mist/vapours/spray.</td></tr> <tr> <td>P264</td><td>Wash ... thoroughly after handling.</td></tr> <tr> <td>P270</td><td>Do not eat, drink or smoke when using this product.</td></tr> <tr> <td>P271</td><td>Use only outdoors or in a well-ventilated area.</td></tr> <tr> <td>P273</td><td>Avoid release to the environment.</td></tr> <tr> <td>P280</td><td>Wear protective gloves/protective clothing/eye protection/face protection.</td></tr> <tr> <th>Response Code</th><th>Phrase</th></tr> <tr> <td>P301+P312</td><td>IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.</td></tr> <tr> <td>P302+P352</td><td>IF ON SKIN: Wash with plenty of soap and water.</td></tr> <tr> <td>P304+P340</td><td>IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.</td></tr> <tr> <td>P312</td><td>Call a POISON CENTER or doctor/physician if you feel unwell.</td></tr> <tr> <td>P314</td><td>Get medical advice/attention if you feel unwell.</td></tr> <tr> <td>P330</td><td>Rinse mouth.</td></tr> <tr> <td>P363</td><td>Wash contaminated clothing before reuse.</td></tr> <tr> <th>Disposal Code</th><th>Phrase</th></tr> <tr> <td>P501</td><td>Dispose of contents/container to ...</td></tr> </table>	Prevention Code	Phrase	P260	Do not breathe dust/fume/gas/mist/vapours/spray.	P261	Avoid breathing dust/fume/gas/mist/vapours/spray.	P264	Wash ... thoroughly after handling.	P270	Do not eat, drink or smoke when using this product.	P271	Use only outdoors or in a well-ventilated area.	P273	Avoid release to the environment.	P280	Wear protective gloves/protective clothing/eye protection/face protection.	Response Code	Phrase	P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.	P302+P352	IF ON SKIN: Wash with plenty of soap and water.	P304+P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.	P312	Call a POISON CENTER or doctor/physician if you feel unwell.	P314	Get medical advice/attention if you feel unwell.	P330	Rinse mouth.	P363	Wash contaminated clothing before reuse.	Disposal Code	Phrase	P501	Dispose of contents/container to ...
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DSD / DPD label elements



Relevant risk statements are found in section 2.1

Indication(s) of danger:	CONSIDERED A DANGEROUS MIXTURE ACCORDING TO DIRECTIVE 1999/45/EC AND ITS AMENDMENTS.		
Safety advice:	S23	• Do not breathe gas/fumes/vapour/spray.	
	S24	• Avoid contact with skin.	
	S36	• Wear suitable protective clothing.	
	S37	• Wear suitable gloves.	
	S51	• Use only in well ventilated areas.	
	S09	• Keep container in a well ventilated place.	
	S401	• To clean the floor and all objects contaminated by this material, use water and detergent.	
	S07	• Keep container tightly closed.	
	S13	• Keep away from food, drink and animal feeding stuffs.	
	S46	• If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).	

2.3. Other hazards

No data available

PBT/vPvB criteria	No data available
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SECTION 3: Composition / information on ingredients

3.1. Substances

See 'Composition on ingredients' in section 3.2

3.2. Mixtures

1. CAS No 2. EC No 3. Index No 4. REACH No	%[weight]	Name	Classification according to Directive 1999/45/EC [DPD]		Classification according to (EC) No 1272/2008 [CLP]
1. 27236-65-3 2. 248-355-2 3. 080-004-00-7 4. No data available	<1	bis(phenylmercury) dodeceny/succinate	T+		Acute Tox. 2 *
			N	R50/53	Acute Tox. 1
				R26/27/28	Acute Tox. 2 *
					STOT RE 2 *
				R33	Aquatic Acute 1
					Aquatic Chronic 1
CLP classification according to Annex VI of CLP (Regulation (EC) No 1272/2008)					
1. 13674-84-5* 2. 237-158-7 3. 237-158-7 4. No data available	>25	tris(2-chloroisopropyl)phosphate	Xn	R22	• Acute Toxicity Category 4

SECTION 4: First aid measures

4.1. Description of first aid measures

General: No data available

Ingestion:

- **IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.**
- For advice, contact a Poisons Information Centre or a doctor.
- Urgent hospital treatment is likely to be needed.
- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.
- If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.
- If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.

Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:

- **INDUCE** vomiting with fingers down the back of the throat, **ONLY IF CONSCIOUS**. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Eye Contact:

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

4.2. Most important symptoms and effects, both acute and delayed

Inhaled:

- Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
- The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

Ingestion:

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

Skin Contact:

- Skin contact with the material may be harmful; systemic effects may result following absorption.
- The material is not thought to be a skin irritant (i.e. is unlikely to produce irritant dermatitis as described in EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

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).

Chronic:

Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.

4.3. Indication of any immediate medical attention and special treatment needed

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.
- Activated charcoal interrupts absorption; cathartics should be administered when charcoal is given.
- The use of British Anti-Lewisite is indicated in severe inorganic poisoning. Newer derivatives of BAL (e.g. dimercaptosuccinic acid, [DMSA] and 2,3-dimercapto-1-propanesulfate [DMPS]) may prove more effective. [Ellenhorn and Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens from a healthy worker exposed at the Exposure Standard (ES or TLV).

Determinant	Index	Sampling Time	Comments
1. Total inorganic mercury in urine	35 ug/gm creatinine	Preshift	B
2. Total inorganic mercury in blood	15 ug/L	End of shift at end of workweek	B

B: Background levels occur in specimens collected from subjects **NOT** exposed.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility: None known.

5.3. Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding 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.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard:

- Non combustible.
- Not considered a significant fire risk, however containers may burn.

May emit poisonous fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal Protective Equipment: Breathing apparatus.Chemical splash suit.

Minor Spills:

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable, labelled container for waste disposal.

Major Spills:

Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Neutralise/decontaminate residue (see Section 13 for specific agent).
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
- If contamination of drains or waterways occurs, advise emergency services.

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the MSDS

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Safe handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT enter confined spaces until atmosphere has been checked.**
- **DO NOT allow material to contact humans, exposed food or food utensils.**
- Avoid contact with incompatible materials.
- When handling, **DO NOT eat, drink or smoke.**
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Fire and explosion protection See section 5

Other information

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+

X

+

X

X

+

+: May be stored together.
 O: May be stored together with specific precautions.
 X: Must not be stored together.

7.2. Conditions for safe storage, including any incompatibilities

Suitable container:

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

Storage incompatibility:

- 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

None known

Package Material Incompatibilities:

No data available

7.3. Specific end use(s)

See section 1.2

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Derived No Effect Level (DNEL)

Exposure Pattern	Workers	General Population	Exposure Pattern	Workers	General Population
Long term - dermal, systemic effects	No data available	No data available	Short term - dermal, systemic effects	No data available	No data available
Long term - inhalation, systemic effects	No data available	No data available	Short term - inhalation, systemic effects	No data available	No data available
Long term - oral, systemic effects	No data available	No data available	Short term - oral, systemic effects	No data available	No data available
Long term - dermal, local effects	No data available	No data available	Short term - dermal, local effects	No data available	No data available
Long term - inhalation, local effects	No data available	No data available	Short term - inhalation, local effects	No data available	No data available

Occupational Exposure Limits (OEL)

The following materials had no OELs on our records

- bis(phenylmercury) dodeceny succinate:
- tris(2-chloroisopropyl)phosphate:

CAS:27236-65-3

CAS:13674-84-5

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m³)	Revised IDLH Value (ppm)
bis(phenylmercury) dodeceny succinate 35331	10	

BIS(PHENYLMERCURY) DODECENYLSUCCINATE: EME215/40A POLYOL:

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). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

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.

TRIS(2-CHLOROISOPROPYL)PHOSPHATE:

Not available

8.2. Exposure controls

8.2.1. Appropriate 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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:

Air Speed:

solvent, vapours, degreasing etc., evaporating from tank (in still air).

0.25-0.5 m/s (50-100 f/min.)

aerosols, fumes from pouring operations, intermittent container filling, low speed conveyor transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)

0.5-1 m/s (100-200 f/min.)

1-2.5 m/s (200-500 f/min.)

direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)

grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

1: Room air currents minimal or favourable to capture

2: Contaminants of low toxicity or of nuisance value only.

3: Intermittent, low production.

4: Large hood or large air mass in motion

Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

3: High production, heavy use

4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

8.2.2. Personal protection



Eye and face protection:

- 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]

Skin protection:

See Hand protection: below

Hand protection:

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Contaminated gloves should be replaced.

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

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.

*Michael B Blayney:

Applied Occupational and Environmental Hygiene: 16, pp 233-236, 2001

* Originally quoted as mil (one mil = 0.001 inches)

Body protection:

See Other protection: below

Other protection:

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

Respiratory protection:

Thermal hazards:

No data available

Recommended material(s):

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

Material

CPI

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

8.2.3. Environmental exposure controls

See section 12

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	No data available
Odour	No data available
Odour threshold	No data available
Taste	No data available
pH (1% solution)	No data available
pH (as supplied)	No data available
Melting point / freezing point (°C)	No data available
Initial boiling point and boiling range (°C)	No data available
Flash point (°C)	No data available
Evaporation rate	No data available
Flammability	No data available
Vapour pressure (kPa)	No data available
Vapour density (Air = 1)	No data available
Relative density (Water = 1)	1.20
Solubility in Water (g/L)	No data available
Partition coefficient: n-octanol / water	No data available
Auto-ignition temperature (°C)	No data available
Critical temperature (°C)	No data available
Viscosity (cSt)	No data available
Explosive properties	No data available
Oxidising properties	No data available
Physical state	Liquid
Upper Explosive Limit (%)	No data available
Lower Explosive Limit (%)	No data available
Surface Tension	No data available
Volatile Component (%vol)	No data available
Gas group	No data available
Molecular weight (g/mol)	No data available
Evaporation Rate (BuAc = 1 EtAc = 1 Ether = 1)	No data available
IUCLID Remarks	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1.	Reactivity	See section 7.2
10.2.	Chemical stability	<ul style="list-style-type: none"> • Presence of incompatible materials. • Product is considered stable. • Hazardous polymerisation will not occur.
10.3.	Possibility of hazardous reactions	See section 7.2
10.4.	Conditions to avoid	See section 7.2
10.5.	Incompatible materials	See section 7.2
10.6.	Hazardous decomposition products	See section 5.3

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Mutagenicity:	No data available
Reproductive Toxicity:	No data available
Carcinogenicity:	No data available
STOT - single exposure:	No data available

BIS(PHENYLMERCURY) DODECENYLSUCCINATE:EME215/40A POLYOL: No significant acute toxicological data identified in literature search.EME215/40A POLYOL:--OTHERBIS (PHENYLMERCURY) DODECENYLSUCCINATE:TRIS(2-CHLOROISOPROPYL)PHOSPHATE: None assigned. Refer to individual constituents.

SECTION 12: Ecological information

12.1. Toxicity

Fish:	No data available
Daphnia Magna:	No data available
Algae:	No data available
	No data available

Toxic to aquatic micro-organisms:

TRIS(2-CHLOROISOPROPYL)PHOSPHATE: BIS(PHENYLMERCURY) DODECENYLSUCCINATE:
DO NOT discharge into sewer or waterways.
BIS(PHENYLMERCURY) DODECENYLSUCCINATE:
Marine Pollutant Yes

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
Mercury may occur in the environment as free mercury, Hg(0), mercury ions in salts and complexes, Hg+ and (Hg2)2+ and as organic mercury compounds. Each species has its own set of physical, chemical and toxicologic properties.
In natural systems a dynamic equilibrium between soil and water mercury occurs determined largely by the physicochemical and biological conditions which pertain. Mercury ion is transported to aquatic ecosystems via surface run-off and from the atmosphere. It is complexed or tightly bound to both inorganic and organic particles, particularly sediments with high sulfur content. Organic acids such as fulvic and humic acids are often associated with mercury not bound to particles. Methyl mercury is produced by sediment micro-organisms, nonbiologically in sediments and by certain species of fish. The methylation of mercury by micro-organisms is the detoxification response that allows the organism to dispose of the heavy metal ions as small organometallic complexes. Methylation occurs only within a narrow pH range in which the micro-organism might exist and the rate of synthesis depends on the redox potential, composition of the microbial population, availability of Hg2+ and temperature. Vitamin B12 derivatives are thought to be the methylating agents, because they are the only methyl carbanion- or methyl radical-donating coenzymes known. In addition it has been demonstrated that the livers of yellow-fin tuna and albacore produce methyl mercury results in its desorption at relatively high rates thus little methyl mercury is found in sediments. Demethylation by sediment micro-organisms also occurs at a rapid rate compared with methylation. The best conversion rate for inorganic mercury to methyl mercury under ideal conditions is less than 1.5% per month. Methyl mercury released into surface waters may also undergo photodecomposition into mercury.
Methyl mercury can be bioaccumulated by planktonic algae and fish. In fish, the rate of absorption of methyl mercury is faster than that of inorganic mercury and the clearance rate is slower resulting in high concentrations of methyl mercury in muscle tissue. The ratio of organic mercury to total mercury is generally high in fish compared with other aquatic organisms. Selenium which is also present in seawater and other seafoods readily complexes with methyl mercury and is thought to have a protective effect against the toxic action of methyl mercury. The danger of methyl mercury poisoning has been illustrated in Minimata, Japan in the late 1950s following industrial release of mercury into the bay which subsequently resulted in at least 1200 cases of poisoning, some fatal.
TRIS(2-CHLOROISOPROPYL)PHOSPHATE:

12.2. Persistence and degradability			
Ingredient	Persistence: Water/Soil		Persistence: Air
EME215/40A POLYOL	No Data Available		No Data Available
bis(phenylmercury) dodeceny succinate	No Data Available		No Data Available
tris(2-chloroisopropyl)phosphate	HIGH		No Data Available
12.3. Bioaccumulative potential			
Ingredient	Bioaccumulation		
tris(2-chloroisopropyl)phosphate	LOW		
12.4. Mobility in soil			
Ingredient	Mobility		
tris(2-chloroisopropyl)phosphate	MED (ESTIMATED)		
12.5. Results of PBT and vPvB assessment			
	P	B	T
Relevant available data	No data available	No data available	No data available
PBT and vPvB Criteria fulfilled?	No data available	No data available	No data available
12.6. Other adverse effects			
No data available			

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Product / Packaging disposal:	<ul style="list-style-type: none">Containers may still present a chemical hazard/ danger when empty.Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none">If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.Where possible retain label warnings and MSDS and observe all notices pertaining to the product. <p>Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none">ReductionReuseRecyclingDisposal (if all else fails) <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.</p> <ul style="list-style-type: none">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. <ul style="list-style-type: none">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.

Waste treatment options:	
Sewage disposal options:	No relevant data

Other disposal
recommendations:

SECTION 14: Transport information

Labels Required: No data available

Land transport (ADR / RID / GGVSE)

No data available

14.1. UN number	No data available	14.4. Packing group	No data available	
14.2. UN proper shipping name	No data available	14.5. Environmental hazard	No relevant data	
14.3. Transport hazard class(es)	No data available	14.6. Special precautions for user	Hazard identification (Kemler)	No data available
			Classification Code	No data available
			Hazard Label	No data available
			Special provisions	No data available
			Add limited quantity	No data available

Air transport (ICAO-IATA / DGR)

No data available

No data available				
14.1. UN number	No data available	14.4. Packing group	No data available	
14.2. UN proper shipping name	No data available	14.5. Environmental hazard	No relevant data	
14.3. Transport hazard class(es)		14.6. Special precautions for user		
			Special provisions	No data available
			Cargo Only Packing Instructions	No data available
			Cargo Only Maximum Qty / Pack	No data available
	ICAO/IATA Class:	No data available	Passenger and Cargo Packing Instructions	No data available
	ICAO/IATA Subrisk:	No data available	Passenger and Cargo Maximum Qty / Pack	No data available
	ERG Code	No data available	Passenger and Cargo Limited Quantity Packing Instructions	No data available
			Passenger and Cargo Maximum Qty / Pack	No data available

Sea transport (IMDG-Code / GGVSee)

No data available

No data available						
14.1. UN number	No data available		14.4. Packing group	No data available		
14.2. UN proper shipping name	No data available		14.5. Environmental hazard	No relevant data		
14.3. Transport hazard class(es)	No data available	IMDG Subrisk	No data available	14.6. Special precautions for user	EMS Number	No data available
					Special provisions	No data available
					Limited Quantities	No data available

Inland waterways transport (ADNR / River Rhine)

No data available

No data available					
14.1. UN number	No data available		14.4. Packing group	No data available	
14.2. UN proper shipping name	No data available		14.5. Environmental hazard	No relevant data	
14.3. Transport hazard class(es)	No data available ADNR Label No data available		14.6. Special precautions for user	Classification code	No data available
				Limited quantity	No data available
				Equipment required	No data available
				Fire cones number	No data available

14.7. Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

No data available

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

Regulations for ingredients

bis(phenylmercury) dodeceny succinate (CAS: 27236-65-3) is found on the following regulatory lists;

"European Customs Inventory of Chemical Substances (English)", "European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)"

tris(2-chloroisopropyl)phosphate (CAS: 13674-84-5) is found on the following regulatory lists;

"European Chemicals Agency (ECHA) List of substances identified for registration in 2010", "European Customs Inventory of Chemical Substances (English)", "European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)", "International Chemical Secretariat (ChemSec) REACH SIN* List (*Substitute It Now!) 1.1"

No data for EME215/40A POLYOL (CW: 9-31399)

This safety data sheet is in compliance with the following EU legislation and its adaptations – as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EEC, 94/33/EC, 91/689/EEC, 1999/13/EC, Regulation (EU) No 453/2010, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008, and their amendments as well as the following British legislation:

- The Control of Substances Hazardous to Health Regulations (COSHH) 2002
- COSHH Essentials
- The Management of Health and Safety at Work Regulations 1999

15.2. Chemical safety assessment

ANNEX 1

Ingredient	Annex 1 67/548/EEC
bis(phenylmercury) dodecenylsuccinate	080-004-00-7

Annex VI

Chronic Aquatic Hazard Category 4

Acute Toxicity (Oral) Category 4

Acute Toxicity (Dermal) Category 4

Acute Toxicity (Inhalation) Category 4

STOT - RE Category 2

RISK

Risk Codes	Risk Phrases
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R33	Danger of cumulative effects.
R53	May cause long-term adverse effects in the aquatic environment.

SECTION 16: Other information

ANNEX 2: Indications of Danger

N	Dangerous for the environment
T+	Very toxic
Xn	Harmful

Substance	CAS	Suggested codes
tris(2- chloroisopropyl)phosphate	13674- 84- 5	Mut3; R68 Rep3; R63 Xn; R22 Xi; R38

Denmark Advisory list for selfclassification of dangerous substances

OTHER

- 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. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.
- For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 16 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

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Not applicable