1. Identification of Substance & Company

Product	
Product name	Epcon C6
Other names	Epcon C6 - Part A (grey paste) & Part B (white paste) MORTAR EPCON C6 530ml
Product code	C6-18
HSNO approval	HSR002670 for Part A (grey paste) & HSR002658 for Part B (white paste)
UN number	2735 for complete pack
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-Tris(dimethylaminomethyl) Phenol)
Packaging group	III
Hazchem code	2X
Poison schedule	Not allocated
Uses	Anchoring bolts into concrete.
Company Details	
Company	**Ramset New Zealand** A Division of ITW New Zealand
Address	29 Poland Rd Glenfield Auckland 0627 New Zealand
Telephone	+64 9 444-3510

Emergency Telephone Number: 09 444-3510 (Monday to Friday. 8:00 am to 5:00 pm)
POISON CENTRE NUMBER: 0800 764 766 (24 Hours)

2. Hazard Identification

Hazard Classifications

This product is made of Part A (grey paste) and Part B (white paste), which combine on application to form a non hazardous resin. The two parts are dispensed and mixed in one action through a static mixing nozzle. This MSDS describes the Hazards for both two parts before mixing.

Part A (grey paste) has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002670, Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006), and is classified as follows:
Classes:

6.3B	mild skin irritant
6.4A	eye irritant
6.5B	contact sensitiser
6.9B	suspected human target organ toxicant
9.1B	highly toxic to the aquatic environment

SYMBOLS

WARNING

Part B (white paste) has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002658, Surface Coatings and Colourants (Corrosive) Group Standard 2006), and is classified as follows:
Classes:
6.1E acutely toxic by ingestion
8.2C skin corrosive
8.3A eye corrosive

SYMBOLS

DANGER

Hazard

Part A (grey paste):
Causes mild skin irritation.
Causes eye irritation.
May cause an allergic skin reaction.
May cause damage to organs.
Toxic to aquatic life with long lasting effects.

Part B (white paste):
May be harmful if swallowed
Causes severe skin burns and eye damage.
Causes serious eye damage.

Precautionary

Keep out of reach of children.
Read label before use. Obtain special instructions before use.
Do not breathe fumes.
Wear protective gloves/eye protection/face protection.
Wash hands thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.

Further precautionary statements can be found in Section 4 – First Aid.

3. Composition / Information on Ingredients

Component of Part A (grey paste)	CAS number/ Identification	Class for ingredient(s)	Conc (% w/w)
Bisphenol A diglycidyl ether resin	25068-38-6	6.3B, 6.4A, 6.5B (contact), 6.9B, 9.1B	60-80

Component of Part B (white paste)	CASnumber/ Identification	Class for ingredient(s)	Conc (% w/w)
Isopropanol	67-63-0	3.1B, 6.1E (oral), 6.3B, 6.4A	Trade secret
2,4,6 Tris(dimethylaminomethyl) phenol	90-72-2	6.1D (oral, dermal), 8.2C, 8.3A, 9.3C	Trade secret
Mercaptan/Amine blend	proprietary	Not known	20-40

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

You should call the National Poisons Centre if you feel that you may have been harmed, burned or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).
If medical advice is needed, have this MSDS, product container or label at hand. If exposed or concerned: Get medical advice/ attention.

Recommended first aid facilities	Ready access to running water is required. Accessible eyewash is recommended. Emergency shower, hand wash, soap. CPR training, oxygen mask.

Exposure

Swallowed	IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. Contact a doctor if you feel unwell. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. Immediately call a POISON CENTER or doctor/physician.
Skin contact	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.
Inhaled	Generally, inhalation of fumes is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically. Symptoms of exposure may be delayed.

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is non-flammable. Material will not burn unless pre-heated
Suitable extinguishing substances:	Carbon dioxide, dry chemical, foam and water spray.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Product may decompose in a fire and produce toxic fumes or vapours. Hazardous decomposition products include carbon oxides, oxides of nitrogen and sulphur.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	2X

6. Accidental Release Measures

Containment	If greater than 1,000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. Prevent product from entering environment.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain spill. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses.
Clean-up method	Collect product and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Collect recoverable material into labelled containers for recycling or salvage. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapour. Work up wind or increase ventilation.

7. Storage & Handling

Storage

Avoid storage of harmful substances with food. Store out of reach of children.
Containers should be kept closed in order to minimise contamination.
Keep in a cool, dry place. For maximum shelf life, store between 4˚C and 26˚C. Do not store above 43˚C. Avoid contact with incompatible substances as listed in Section 10.

Handling

Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.
Avoid skin and eye contact and inhalation of vapour.
Use only as directed; avoid uncontrolled mixing with other material, esp polymerisable or combustible materials.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by the NZ Department of Labour for this product. There is a general limit of 10mg/m^3 for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (OSH 2002)	Ingredient	WES-TWA	WES-STEL
	Part A (grey paste):		
	Bisphenol A diglycidyl ether resin	Data unavailable	Data unavailable
	Part B (white paste):		
	Isopropanol	400ppm, 983mg/m^3	500ppm, 1230mg/m^3
	2,4,6 Tris(dimethylaminomethyl)phenol	no data	no data
	Mercaptan/Amine blend	no data	no data

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes

To protect eyes, it is recommended that goggles, safety glasses or full face mask be worn. Avoid wearing contact lenses.

Skin

Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves, e.g. nitrile rubber, NBR gloves. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.

Respiratory

A respirator with an organic vapour cartridge when airborne concentrations approach the WES (section 8) should be used. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

No additional information

9. Physical & Chemical Properties

Appearance	Part A: grey paste, Part B: white paste
Odour	pungent odour
pH	no data
Vapour pressure	no data
Viscocity	no data
Boiling point	>260˚C
Volatile materials	no data
Freezing / melting point	no data
Solubility	Insoluble in water
Specific gravity / density	Part A (grey paste): 1.30 g/cm^{3,} Part B (white paste): 1.70 g/cm^3
Flash point	not flammable, >93˚C
Danger of explosion	not explosive
Auto-ignition temperature	not flammable
Upper and lower flammable limits	not flammable
Corrosiveness	not corrosive

10. Stability & Reactivity

Stability	This product is thermally stable when stored and used as directed.
Conditions to be avoided	Avoid elevated temperatures which may shorten the shelf-life of this product. Avoid open flames.
Incompatible groups	Strong acids and oxidising agents.
Hazardous decomposition products	Thermal decomposition products include carbon oxides, oxides of nitrogen, water and carbon.
Hazardous reactions	None known.

11. Toxicological Information

Summary

No specific data is available for this mixture. Where available, toxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below (supporting data):

The mixture may cause burns to the skin and eyes. Contact may cause irritation, redness and burns. If inhaled, respiratory tract irritation can occur which can result in coughing and difficulties in breathing. Ingestion may result in burns to the lips, oral cavity, upper airways, esophagus and digestive tract. Prolonged or overexposure may cause lung damage.

Routes of Exposure:

Inhalation, ingestion, skin contact, eye contact.

Supporting Data

Acute	**Oral**	Using LD50's for ingredients, the estimated LD50 (oral, rat) for the Part A (grey paste) is > 5,000 mg/kg. LD_{50} (oral) data: Bisphenol A diglycidyl ether resin : 15600mg/kg (mouse), 10.7mL/kg (rat). Using LD_{50}'s for ingredients, the estimated LD_{50} (oral, rat) for the Part B (white paste) is between 2,000 and 5,000 mg/kg. Data considered includes: Isopropanol: 3600 mg/kg (mouse), 2,4,6 Tris(dimethylaminomethyl)phenol: 1673 mg/kg (rat), Mercaptan/Amine blend: >3000mg/kg (rat).
	Dermal	Using LD_{50}'s for ingredients, the estimated LD_{50} (dermal, rat) for both Part A (grey paste) and Part B (white paste) is >5,000 mg/kg. LD_{50} (dermal) data: Bisphenol A diglycidyl ether resin : >20mL/kg (rabbit). : Isopropanol: not reported, 2,4,6 Tris(dimethylaminomethyl)phenol: 1280 mg/kg (rat), Mercaptan/Amine blend: not reported.
	Inhaled	Inhalation may cause irritation to the throat and respiratory tract.
	Eye	Part A (grey paste) is considered to be irritating to the eye, because some of the ingredients (Bisphenol A diglycidyl ether resin), present is considered an eye irritant. Part B (white paste) is considered to be corrosive to the eye, because some of the ingredients (2,4,6 Tris(dimethylaminomethyl)phenol) present at >3% are considered eye corrosives.
	Skin	Part A (grey paste) is considered to be a mild skin irritant, because some of the ingredients (Bisphenol A diglycidyl ether resin) present are considered mild skin irritants. Part B (white paste) is considered to be corrosive to the skin, because some of the

		ingredients (2,4,6 Tris(dimethylaminomethyl)phenol) present at >5% are considered skin corrosives.
Chronic	**Sensitisation**	Part A (grey paste) is considered to be a contact sensitizer due to the presence of Bisphenol A diglycidyl ether resin. No ingredient present in Part B (white paste) at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present in the uncured mixture at concentrations > 0.1% is considered a carcinogen. Isopropanol is classified 3 – Not classifiable as a human carcinogen by IARC.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation by ERMA. However there is evidence that isopropanol has demonstrated reproductive toxicity in animal studies.
	Systemic	Part A (grey paste) is suspected to be a target organ toxicant by dermal contact and by inhalation, because one of the ingredients (Bisphenol A diglycidyl ether resin) present in greater than 1% are suspected to be a target organ toxicant. No ingredient present in Part B (white paste) at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

No specific data is available for this product. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below. The product is considered to have the following ecotoxicity groups:

Supporting Data

Aquatic	Using EC_{50}'s for ingredients, the estimated EC_{50} for the mixture is between 1mg/L and 10 mg/L. The R-phrases for Part A (grey paste) are R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The estimated EC_{50} for Part B (white paste) is >100 mg/L. For Isopropanol the LC_{50} (Bluegill, 96hr) >1400mg/L.
Bioaccumulation	Not biodegradable.
Degradability	Not applicable.
Soil	No data available for the mixture.
Terrestrial vertebrate	This product is not considered harmful to terrestrial vertebrates. No LC_{50} (diet) data for ingredients are available and the classification is based on the LD_{50} (oral) – see section 11 – oral toxicity.
Terrestrial invertebrate	The mixture is not considered harmful to terrestrial invertebrates.
Biocidal	Not applicable

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	The cartridges are a disposable injection system and therfore cannot be recycled. Send to landfill or similar.

14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). The complete pack considered a hazardous substance for transport.

UN number:	2735 for complete pack	**Proper shipping name:**	AMINES, LIQUID, CORROSIVE, N.O.S. (2,4,6-tris(dimethylaminomethyl) Phenol (Part B))
Class(es):	8	**Packing group:**	III
Precautions:	Corrosive, Ecotoxic.	**Hazchem code:**	2X

15. Regulatory Information

Both parts of this product are approved under HSNO.

Part A (grey paste); ERMA approval code: Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006, HSR002670),

Part B (white paste): ERMA approval code: Surface Coatings and Colourants (Corrosive) Group Standard 2006, HSR002658).

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:	
MSDS	To be available within 10 minutes in workplaces storing any quantity.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Approved Evacuation Scheme required if > 1000L of Part A (grey paste) or >10000L of Part B (white paste) is stored.
Approved handler	Not required.
Tracking	Not required.
Bunding and secondary containment	Required if > 1000L of Part A (grey paste) or >10000L of Part B (white paste) is stored in any one location.
Signage	Required if > 1000L is stored in any one location. (Ecotoxic, Corrosive).
Test certificate	Not required.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Part A (grey paste): Approval Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006 Controls, ERMA. www.ermanz.govt.nz; Part B (white paste): Approval Surface Coatings and Colourants (Corrosive) Group Standard 2006 Controls, ERMA. www.ermanz.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS	Material Safety Data Sheet (or Safety Data Sheet)
OSH	The Occupational Safety and Health Service of the Department of Labour (NZ)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day.

References

Data	Unless otherwise stated comes from the ERMA HSNO chemical classification information database (CCID) http://www.ermanz.govt.nz/hs/compliance/chemicals.html , for specific chemicals.
ERMA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the ERMA New Zealand User Guide to the HSNO Control Regulations
WES 2002	The NZ Workplace Exposure Standards Effective from 2002, published by OSH and available on their web site – www.osh.dol.govt.nz.
Other References:	Manufacturers MSDS, ChemIDplus

Disclaimer

This MSDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The MSDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the MSDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. **The likely HSNO classifications for this MSDS have been estimated based on general information from the supplier (e.g., hazard, toxicological).** Full formulation details were not available. This MSDS is copyright Datachem and must not be copied, edited or used for other than intended purpose.
To contact the MSDS author, email info@datachem.co.nz or phone: ***+64 9 940 30 80.***

Datachem