

**1. Identification of Substance & Company**

<b>Product</b>	
<b>Product name</b>	Epcon C8
<b>Other names</b>	none
<b>Product code</b>	Not assigned
<b>HSNO approval</b>	HSR002670 for Part A & HSR002670 for Part B
<b>UN number</b>	Part A: 3077, Part B: 1759
<b>Proper shipping name:</b>	Part A: ENVIRONMENTALLY HAZARDOUS SUBSTANCE n.o.s. (contains: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight < 700), reaction product: bisphenol-F-(epichlorhydrin)) Part B: CORROSIVE SOLID, n.o.s. (contains m-phenylenebis(methylamine), bis[(dimethylamino)methyl]phenol)
<b>Packaging group</b>	III
<b>Hazchem code</b>	2X
<b>Uses</b>	Two part Epoxy
<b>Company Details</b>	
<b>Company</b>	<b>Ramset New Zealand</b> A Division of ITW New Zealand
<b>Address</b>	29 Poland Rd Glenfield Auckland 0627 New Zealand
<b>Telephone</b>	+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 and Part B, 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 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

This product does contain crystalline silica which is classified as a carcinogen and systemic toxicant if inhaled as a respirable dust. This product is a paste. Sanding of the dried product may release the material in a respirable form.

**SYMBOLS****WARNING**

Part B 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 (oral)	acutely toxic by ingestion
6.1E (dermal)	acutely toxic in contact with skin
6.5A	respiratory sensitiser
6.5B	contact sensitiser
8.2C	skin corrosive
8.3A	eye corrosive
9.1D	harmful to the aquatic environment

**SYMBOLS**

**DANGER**



**Hazard**

**Part A:**

Causes mild skin irritation.  
 Causes eye irritation.  
 May cause an allergic skin reaction.  
 Causes damage to organs through prolonged or repeated exposure  
 Toxic to aquatic life with long lasting effects.

**Part B:**

May be harmful if swallowed  
 May be harmful in contact with skin.  
 Causes severe skin burns and eye damage.  
 Causes serious eye damage.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause an allergic skin reaction.  
 Harmful to aquatic life.

**Precautionary**

Keep out of reach of children.  
 Read label before use. Obtain special instructions before use.  
 Do not handle until all safety precautions have been read and understood.  
 Do not breathe fumes. Use only outdoors or in a well-ventilated area.  
 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. Collect spillage.

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

**3. Composition / Information on Ingredients**

Component of Part A	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	25-50%
reaction product of a diacrylate and a propanediyl	proprietary	6.4A	10-25%
bisphenol F Epoxy Resin	28064-14-4	6.3B, 6.4A, 6.5B (contact), 6.9B, 9.1B	10-25%
silica	14808-60-7	6.7A, 6.9A	2.5-10
butanedioldiglycidyl ether	2425-79-8	6.1D (Dermal, Inhalation), 6.3A , 6.4A , 6.5B	2.5-10%
trimethylolpropane triacrylate	15625-89-5	6.1E (Dermal), 6.3A, 6.4A, 6.5B, 9.1B	2.5-10%

Component of Part B	CAS number/ Identification	Class for ingredient(s)	Conc (% w/w)
Quartz (SiO <sub>2</sub> )	14808-60-7	6.7A, 6.9A	25-50%
Benzene-1,3-Dimethylamine (MXDA)	1477-55-0	6.1C (inhalation), 6.1D (oral), 6.5A, 6.5B, 8.2C, 8.3B, 9.1C	10-25%
2,4,6 Tris(dimethylaminomethyl)-phenol	90-72-2	6.1D (oral, dermal), 8.2C, 8.3A, 9.3C	10-25%
bis[(dimethylamino)methyl]phenol	71074-89-0	8.2C, 8.3A	1-2.5

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.

**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Skin contact** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.

**Inhaled** IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

##### Advice to Doctor

Treat symptomatically. If skin sensitisation has developed and a causal relationship has been confirmed, further exposure to this product and analogous compounds should not be allowed.

#### 5. Firefighting Measures

**Fire and explosion hazards:** There are no specific risks for fire/explosion for this chemical. It is classed as non-flammable. Material can burn.

**Suitable extinguishing substances:** Carbon dioxide, dry chemical, foam and water spray.

**Unsuitable extinguishing substances:** Water jets

**Products of combustion:** Product may decompose in a fire and produce toxic fumes or vapours. Hazardous decomposition products include carbon oxides and oxides of nitrogen, ammonia.

**Protective equipment:** Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.

**Hazchem code:** 2X

## 6. Accidental Release Measures

<b>Containment</b>	If greater than 1000kg is stored, secondary containment and emergency plans to manage any potential spills must be in place. Prevent product from entering environment.
<b>Emergency procedures</b>	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.
<b>Clean-up method</b>	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.
<b>Disposal</b>	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.
<b>Precautions</b>	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapour. Work up wind or increase ventilation.

## 7. Storage & Handling

<b>Storage</b>	Avoid storage of harmful substances with food. Prolonged storage in temperature >30°C may shorten the shelf life. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Store in original container. Keep in a cool, dry place. Avoid contact with incompatible substances as listed in Section 10.
<b>Handling</b>	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. Avoid the formation of dust, e.g. by sanding cured material.

## 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<sup>3</sup> for dusts and mists when limits have not otherwise been established.


NZ Workplace Exposure Stds (OSH 2011)	Ingredient	WES-TWA	WES-STEL
	Crystalline silica	0.2mg/m <sup>3</sup> (quartz, respirable dust) 0.1mg/m <sup>3</sup> (cristobalite, respirable dust)	No data
	Benzene-1,3-Dimethylamine	Ceiling: 0.1mg/m <sup>3</sup>	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. latex or PVA, 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**

<b>Appearance</b>	paste
<b>Odour</b>	no data
<b>pH</b>	Part B: slightly basic
<b>Vapour pressure</b>	no data
<b>Viscosity</b>	no data
<b>Boiling point</b>	no data
<b>Volatile materials</b>	no data
<b>Freezing / melting point</b>	no data
<b>Solubility</b>	insoluble in water
<b>Specific gravity / density</b>	>1
<b>Flash point</b>	non flammable.
<b>Danger of explosion</b>	not explosive
<b>Auto-ignition temperature</b>	not applicable
<b>Upper and lower flammable limits</b>	not applicable
<b>Corrosiveness</b>	Part B is corrosive.

**10. Stability & Reactivity**

<b>Stability</b>	This product is thermally stable when stored and used as directed.
<b>Conditions to be avoided</b>	Avoid elevated temperatures which may shorten the shelf-life of this product. Avoid open flames. Avoid contact with copper and brass. UV light induces a slow oxidation in the presence of oxygen.
<b>Incompatible groups</b>	Part A: water, oxidising agents, acids, bases, amines. Part B: acids, sodium hypochlorite, metals, peroxides, oxidising agents.
<b>Hazardous decomposition products</b>	Thermal decomposition products include carbon oxides, oxides of nitrogen, ammonia, water and carbon.
<b>Hazardous reactions</b>	Vigorous polymerisation can occur on contact with caustic at 200°C. Reaction with epoxy resin will result in formation of solid polymer, which may be accompanied by considerable exothermic and generation of heat.

**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):

For Part A; Skin contact may cause mild skin irritation and may cause moderate to strong sensitising of skin on prolonged or repeated contact.

Eye contact with liquid will cause moderate irritation, causing redness and burning sensation.

Inhalation at elevated temperatures may cause irritation of the respiratory tract.

For Part B:

The mixture causes burns to the skin and eyes. Skin contact may cause severe injury to skin and may cause skin sensitisation or other allergic responses. May cause an allergic reaction by skin contact.

Eye contact may cause severe irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Vapours may irritate the eye.

If inhaled, respiratory tract irritation can occur which can result in coughing and difficulties in breathing and asthma symptoms in susceptible individuals.

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation or ulceration.

Cured Product: low toxicity expected. In the event of dust formed by mechanical action (sanding, sawing, etc..), this dust may cause irritation by inhalation and contact with eyes.

**Routes of Exposure:**

Inhalation, ingestion, skin contact, eye contact.

**Supporting Data**

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the part A is > 5,000 mg/kg. Data considered includes: Bisphenol A diglycidyl ether resin : 15600mg/kg (mouse), 10.7mL/kg (rat).
	<b>Dermal</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the part B is between 2,000 and 5,000 mg/kg. Data considered includes: Benzene-1,3-Dimethylamine 930mg/kg (rat), 2,4,6 Tris(dimethylaminomethyl)phenol 1673 mg/kg (rat). Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (dermal, rat) for part A is >5000 mg/kg. Data considered includes: Bisphenol A epoxy resin >20mL/kg (rabbit), Bisphenol-F epichlorhydrin resin MW<700 Bisphenol A: >20mL/kg (rabbit), butanedioldiglycidyl ether 1130mg/kg (rabbit), Trimethylolpropane triacrylate 2500 mg/kg (mouse).
	<b>Inhaled Eye</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (dermal, rat) for the mixture is between 2000 and 5000 mg/kg. Data considered includes: Benzene-1,3-Dimethylamine 2000mg/kg (rabbit), 2,4,6 Tris(dimethylaminomethyl)phenol 1280 mg/kg (rat). Inhalation may cause irritation to the throat and respiratory tract.
	<b>Skin</b>	Part A is considered to be irritating to the eye, because some of the ingredients (Bisphenol A/F diglycidyl ether resin), present is considered an eye irritant. Part B is considered to be corrosive to the eye, because some of the ingredients (Benzene-1,3-Dimethylamine, phenolderivatives) present at >3% are considered eye corrosives.
<b>Chronic</b>	<b>Sensitisation</b>	Part A is considered to be a skin irritant, because some of the ingredients (Bisphenol A diglycidyl ether resin) present are considered skin irritants. Part B is considered to be corrosive to the skin, because some of the ingredients (Benzene-1,3-Dimethylamine, phenol derivatives) present at >5% are considered skin corrosives.
	<b>Mutagenicity</b>	Part A is considered to be a contact sensitizer due to the presence of Bisphenol A diglycidyl ether resin. Part B is considered to be a contact and respiratory sensitiser due to the presence of Benzene-1,3-Dimethylamine.
	<b>Carcinogenicity</b>	No ingredient present in the uncured mixture at concentrations > 0.1% is considered a mutagen.
	<b>Reproductive / Developmental</b>	This mixture does contain crystalline silica. Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC Group 1). The mixture is a paste and does not trigger this classification, however if sanding the cured mixture, respirable dust may result.
	<b>Systemic</b>	No data for mixture is available. No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	<b>Aggravation of existing conditions</b>	The mixture is considered to be a suspected target organ toxicant, Bisphenol A/F Epoxy Resin is a suspected systemic toxicant. This mixture also contains crystalline silica Crystalline silica triggers 6.9A classification if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting. This is due to the development of acute silicosis which can occur following exposure to extremely high levels of fine silica dust. Silicosis is a type of pneumoconiosis – a disease of the lung that causes inflammation, scar tissue, lesions and fibrosis in the lung (alveolar). Symptoms include shortness of breath, cough, fever, loss of appetite and cyanosis (bluish skin). Silicosis can occur following prolonged exposure (e.g., 10 years) to relatively high levels of fine crystalline silica dust.
		Persons with existing lung conditions may be at a higher risk of further adverse health effects (as above). Smokers have an increased risk of lung cancer and silicosis.

## 12. Ecological Data

### Summary

No specific data is available for this product. The product (part A) is toxic to aquatic organisms. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below. Once cured, the mixture is not expected to be harmful to the environment.

### Supporting Data

<b>Aquatic</b>	Part A may be ecotoxic in the aquatic environment. Bisphenol Epoxy resin are classified by EPA as 9.1B. Part B is considered harmful in the aquatic environment.
<b>Bioaccumulation</b>	No evidence of bioaccumulation
<b>Degradability</b>	No data
<b>Soil</b>	No data available for the mixture.
<b>Terrestrial vertebrate</b>	This product is considered harmful to terrestrial vertebrates. No LC <sub>50</sub> (diet) data for ingredients are available and the classification is based on the LD <sub>50</sub> (oral) – see section 11 – oral toxicity.
<b>Terrestrial invertebrate</b>	The mixture is not considered harmful to terrestrial invertebrates.
<b>Biocidal</b>	Not applicable

## 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	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.
<b>Contaminated packaging</b>	The cartridges are a disposable injection system and therefore 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 dangerous good for transport.

Part A		<b>UN number:</b>	3077	<b>Proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE n.o.s. (contains: reaction product: bisphenol-a-(epichlorhydrin) epoxy resin (number average molecular weight < 700), reaction product: bisphenol-f-(epichlorhydrin))
<b>Class(es):</b>	9	<b>Packing group:</b>			III
<b>Precautions:</b>	Ecotoxic	<b>Hazchem code:</b>			2Z
Part B		<b>UN number:</b>	1759	<b>Proper shipping name:</b>	CORROSIVE SOLID, n.o.s. (contains m-phenylenebis(methylamine), bis[(dimethylamino)methyl]phenol)
<b>Class(es):</b>	8	<b>Packing group:</b>			III
<b>Precautions:</b>	Corrosive.	<b>Hazchem code:</b>			2X

## 15. Regulatory Information

Both parts of this product are approved under HSNO. Part A; EPA approval code: Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006, HSR002670), Part B: EPA approval code: Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006, HSR002670).

### 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	Required if > 1000L of Part A or >1000L of Part B is stored.
Approved handler	Not required.
Tracking	Not required.
Bunding and secondary	Required if > 1000L of Part A or >1000L of Part B is stored in any one location.

containment  
 Signage Required if > 1000L is stored in any one location.  
 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: Approval Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006 Controls, EPA. [www.epa.govt.nz](http://www.epa.govt.nz); Part B: Approval Surface Coatings and Colourants (Subsidiary Hazard) Group Standard 2006 Controls, EPA. [www.epa.govt.nz](http://www.epa.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<sub>50</sub>** 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 (now EPA)

**EPA** Environmental Protection Agency (previously known as ERMA)

**HSNO** Hazardous Substances and New Organisms (Act and Regulations)

**IARC** International Agency for Research on Cancer

**LEL** Lower Explosive Limit

**LD<sub>50</sub>** Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).

**LC<sub>50</sub>** 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.

**References**

**Data** Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) <http://www.epa.govt.nz/hs/compliance/chemicals.html> , for specific chemicals.

**EPA Transfer Gazettes** Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)

**Controls Matrix** Part of the EPA New Zealand User Guide to the HSNO Control Regulations

**WES 2011** The NZ Workplace Exposure Standards Effective from 2011, published by OSH and available on their web site – [www.osh.dol.govt.nz](http://www.osh.dol.govt.nz).

**Other References:** Manufacturers MSDS, ingredient MSDS, ChemIDplus

**Review**

<b>Date</b>	<b>Reason for Review</b>
February 2012	New MSDS

**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](mailto:info@datachem.co.nz) or phone: **+64 9 940 30 80**.

