


MATERIAL SAFETY DATA SHEET according to EU Directive 93/112/EC EPOXY TANKING - PART A & B		
Version: 2	Print date: 27.3.08	

1. Identification of Substance/Preparation and Company

Product Name	Epoxy tanking -part A
Company	Biokil Crown Ltd 7 Stadium Ind Park, Long Eaton Nottingham, NG10 2DD
Telephone	0115 946 0060
Fax	0115 946 9767
Emergency Telephone	07967 10 71 95

2. Composition / Information on ingredients

Preparation description	Epoxy amine adduct emulsion	
CAS Number and Chemical Name	%	Classification
7732-18-5 Water	35-69	None
Polyamino-amide	30-60	Xi:R41
Polyethyleneamines	1-5	C: Xn: R21/22, R34, R43

3. Hazards identification


Irritating to skin (R38). Risk of serious damage to eyes (R41)> May cause sensitisation by skin contact (R43).
Signs and Symptoms of Exposure (Possible Longer Term Effects)
Repeated and/or prolonged contact with the skin may cause allergic reaction/sensitisation.
Repeated and/or prolonged exposure may result in: adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as defatting, rash, irritation or corrosion), adverse respiratory effects (such as cough, tightness of chest or shortness of breath).

4. First aid measures

Signs and Symptoms of Exposure (Acute Effects)	
Eye Contact	Contact with eyes causes severe irritation and pain. Hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice immediately.
Skin Contact	Contact with skin causes severe irritation and pain. Remove product and immediately flush affected area with water for at least 15 minutes.
Ingestion	If swallowed seek medical advice immediately. Induce vomiting or remove stomach contents by gastric suction only as directed by medical personnel.
Inhalation	Inhalation of vapours may cause irritation in the respiratory tract. In case of inhalation move patient at once to fresh air and seek medical advice.

5. Fire fighting measures

Suitable extinguishing media
Extinguishing Media
Ignition will give rise to a Class B fire. In case of fire use: Water Spray, Carbon Dioxide (Co²) Dry Chemical Alcohol Foam.
Special Exposure Hazards (Fire Fighting)
May generate toxic, irritating or flammable combustion products. May generate carbon monoxide gas. May generate toxic nitrogen oxide gases.
Special Fire Fighting Procedures
Keep containers cool with water spray. Avoid skin contact. Wear complete body protective butyl rubber clothing. Use water spray to reduce vapours. Fire-fighters should wear butyl rubber boots, gloves and body suit and self contained breathing apparatus.

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6. Accidental release measures

Prevent accidental spillage's to enter streams or drinking water supplies.

7. Handling and storage

Handling: Avoid contact with eyes. Avoid breathing vapours.
Storage: Keep away from oxidizers, heat or flames. Protect containers from physical damage and from freezing.

8. Exposure controls / personal protection

Personal Protection
a) Respiratory Protection Under normal conditions – not required.
b) Hand Protection Nitrile rubber gloves or any impermeable gloves must be worn
c) Eye Protection Goggles or chemical safety glasses
d) Skin Protection Protective long sleeved overalls must be worn

9. Physical and chemical properties

Appearance	Mobile viscous liquid
Colour	Red Brown
Odour	Ammoniacal
pH	Alkaline
Boiling Point	100C (212F)
Flash Point	Not determined
Flammability	Not Applicable
Autoflammability	>150C (>302F)
Explosive Limits	No data
Vapour Pressure	Not determined
Relative Density	1.047 @ 25C (77F)
Water Solubility	Completely
Partition Coefficient:	n-Octanol/Water: No data
Viscosity	40,000 – 60,000 cps @ 25C (77F)

10. Stability and reactivity

Materials to avoid
Oxidising Agents (i.e. perchlorates, nitrates etc), Amines. A reaction accompanied by large heat release occurs when the product is mixed with acids.
Hazardous Decomposition Products
Carbon Monoxide in a fire. Carbon Dioxide in a fire. Nitrogen Oxides in a fire. Irritating and toxic fumes at elevated temperatures.
Hazardous Polymerisation
Will not occur.


11. Toxicological information

Oral LD50 (rat)	>2000 mg/kg (estimate)
Dermal LD50 (rabbit)	>5000 mg/kg (estimate)
Inhalation LC50 (rat)	No data

11.1Irritation Effects Data
Moderate irritant to the skin of a rabbit. Severe irritant to the eyes of a rabbit.

12. Ecological information

Information on this mixture is insufficient to classify.

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13. Disposal considerations

Dispose of in accordance with local and national regulations. For example, in the UK regulations made under the Control of Pollution Act 1974 and the Environmental Protection Act 1990. Wear protective clothing during disposal operations. If disposal is by a waste contractor, make sure that he has sufficient information and that waste containers are properly labelled.

14. Transport information

Adr/Rid Shipping Data	Not Regulated
Imo Shipping Data	Not Regulated
Icao/Iata Shipping Data	Not Regulated
Is the Product Classed as a Marine Pollutant	No

15. Regulatory information


EEC Symbol IRRITANT (Xi)
 EEC Council Directive relating to the classification, packaging and labelling of dangerous substances and preparations
 Risk ® and Safety (S) phrases.
 Irritating to skin (R38). Risk of serious damage to eyes (R41). May cause sensitisation by skin contact (R43). In case of contact with eyes, rinse well with plenty of water and seek medical advice (S26). After contact with skin, wash immediately with plenty of soap and water (S28). Wear suitable protective clothing, gloves and eye/face protection (S36/37/39).

16. Other Information

This Safety Data Sheet has been written to comply with Directives 91/155/EEC (the "Safety Data Sheet Directive") and 88/379/EEC (the "General Preparations Directive").

Date Issued: 31.7.1998
 Date Prepared: July 1998
 Reference: SD/ECWB/A
 Intended Use Epoxy Resin Curing Agent
 Product Code Epoxy Tanking (Top Coat) (Pack A – Hardener)
 Other Information Technical Services Department

This information is based on our current knowledge and is intended to describe the product for the purpose of Health, Safety and Environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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Company	Biokil Crown Ltd 7 Stadium Ind Park, Long Eaton Nottingham, NG10 2DD
Telephone	0115 946 0060
Fax	0115 946 9767
Emergency Telephone	07967 10 71 95

2. Composition / Information on ingredients

Preparation description	Blend of liquid epoxy resin, inert fillers, pigments and reactive diluent	
Dangerous components/constituents		
Cas/registry No.	Material Description	% Content
25068-38-6	*4.4 –ISOPROPYLINDENEDIPHENOL EPICHLOROHYDRIN COPOLYMER (Number average molecular weight less than 700) Physical Hazard: Non-classifiable Health hazard: Irritant (Xi) R Phrases: R36, R38, R43, R51 and R53 OEL: None Established	50-70
28064-14-4	*PHENOL-FORMALDEHYDE POLYMER GLYCIDYLETHER Physical Hazard: Non classifiable Health Hazard: Irritant (Xi) R Phrases: R36, R38, R43, R51 and R53 OEL: None established	25-35

3. Hazards identification


Physical Hazard:	None classifiable
Health Hazard	Irritant (Xi) Irritating to eyes and skin. May cause sensitisation by skin contact
Safety Hazards	Not classified as dangerous under EC criteria
Environmental hazards	Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment

4. First aid measures

Symptoms and effects	Irritation of the skin and eyes
First aid – inhalation	No specific measures
First aid – skin	DO NOT DELAY. Remove contaminated clothing. Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention.
First aid – eye	DO NOT DELAY. Flush eye with water. OBTAIN MEDICAL ATTENTION IMMEDIATELY
First aid – ingestion	DO NOT INDUCE VOMITING. If rapid recovery does not occur, obtain medical attention.
Advice to Physicians	If skin sensitisation has developed and a casual relationship has been confirmed, further exposure should not be allowed.

5. Fire fighting measures

Specific hazards	Carbon monoxide may be evolved if incomplete combustion occurs
Extinguishing media – small fires	Dry chemical powder, carbon dioxide, foam, water spray or fog, sand or earth
Extinguishing media – large fires	Foam, water spray or fog
Unsuitable extinguishing media	Water jet
Protective equipment	Full protective clothing and self contained breathing apparatus.

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6. Accidental release measures

Personal precautions	Avoid contact with skin eyes and clothing
Personal protection	Wear protective clothing specified for normal operations (see section 8).
Use barrier cream	
Environmental precautions	Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. If material enters drains, it should be pumped out into an open vessel. Emergency services may need to be called to assist in this operation.
Clean up methods – small spillage	Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum. Scrub contaminated surfaces with a detergent solution.
Clean up methods – large spillage	Transfer to a labelled container for product recover or safe disposal. Treat residues as for small spillage.

7. Handling and storage

Handling	Avoid contact with skin, eyes and clothing
Storage	Keep container tightly closed and store in a dry cool place
Storage temperature	Ambient

8. Exposure controls / personal protection

Occupational exposure standards	None established
Respiratory protection	Not required
Hand protection	PVC gloves
Eye protection	Monogoggles
Body protection	Standard issue work clothes

9. Physical and chemical properties


Physical state	Viscous liquid
Colour	Various
Density	1350 kg/m ³ @ 25°C
Solubility in water	Not miscible
Solubility in Other Solvents	Readily soluble in various organic solvents
Dynamic Viscosity	0.7 to 2 Pa.s @ 25°C

10. Stability and reactivity

Stability	Stable and inert
Conditions to avoid	Temperatures above 90°C
Materials to avoid	Strong oxidising agents. Amines mercaptans, mineral acids and caustic soda
Hazardous decomposition products	Oxides of carbon

11. Toxicological information

Basis for assessment	Information given is based on data on the components and the toxicology of similar products
Acute toxicity – oral	LD50: >2000 mg/kg
Acute toxicity – dermal	LD50: >2000 mg/kg
Eye irritation	Irritant
Skin irritation	Irritant
Skin sensitisation	Skin sensitiser
Mutagenicity	Not mutagenic

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12. Ecological information

Basis for assessment	Information given is based on data on the components and the ecotoxicology of similar products.
Mobility	Sinks in water
Persistence/Degradability	Not readily biodegradable
Bioaccumulation	Has the potential to bioaccumulate
Ecotoxicity	Toxic. 1<LC50 or EC50< OR = 10mg/1 to aquatic organisms
Sewage Treatment	Data not available

13. Disposal considerations


Product disposal	Recover or recycle if possible. Otherwise incinerate or dispose to licensed disposal contractor
Container disposal	Drain container thoroughly, rinse three times with suitable solvent and treat rinsings as for product disposal
Local legislation	Dispose to licensed disposal contractor The UK. All waste should be disposed of using a registered waste carrier operating under the Environmental Protection Act (Duty and Care) Regulations 1992 (S.I. No. 2839)

14. Transport information

UK Carriage Classification	Environmentally Hazardous Substance
UN Conveyance Classification	Environmentally Hazardous Substance
UN Class	9
UN Packaging Group	111
UN Number	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE (Contains Epoxy Resin)
ADR/RID Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains Epoxy Resin)
HS Code Number	390730 00

15. Regulatory information

EC Label name	Contains Epoxy Resin (number average molecular weight <700)
EC Classification	Irritant. Dangerous for the environment
EC Symbols	Xi.N
EC Risk phrases	R36/38 Irritating to eyes and skin R43 May cause sensitisation by skin contact R51/53 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
Safety phrases	S24 Avoid contact with skin S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S28 After contact with skin, wash immediately with plenty of soap and water S37/39 Wear suitable gloves and eye/face protection S61 Avoid release to the environment

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16. Other Information

Safety Data Sheet History Revisions Highlighted	Edition No 4 Added: Classification "Dangerous for the environment" see sections 3 and 15
SDS Distribution	Changes to transport classification and labelling requirements This document contains important information to ensure the safe storage, handling and end use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.
Date Issued:	31.04.1999
Reference:	SD/ECWB/B
Other Information	Technical Services Department