

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet
Issue Date: 21-May-2010
C9317EC

CHEMWATCH 23-6471
Version No:2.0
CD 2010/1 Page 1 of 7

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

LANKO 531 EPOXY MOISTURE BARRIER - PART A

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(contains bisphenol A/ epichlorohydrin resin, liquid)

PRODUCT USE

- Used according to manufacturer's directions.
- Part A of a 2-part epoxy moisture barrier.

SUPPLIER

Company: ParexDavco
Address:
67 Elizabeth Street
Wetherill Park
NSW, 2164
Australia
Telephone: +61 2 9616 3000
Emergency Tel: 1800 039 008
Fax: +61 2 9725 5551
Email: marketing@davco.com.au

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

POISONS SCHEDULE

S5

RISK

- Irritating to eyes and skin.
- May cause SENSITISATION by skin contact.
- Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

SAFETY

- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Wear eye/face protection.
- To clean the floor and all objects contaminated by this material use water.
- This material and its container must be disposed of in a safe way.
- In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).
- Use appropriate container to avoid environmental contamination.
- Avoid release to the environment. Refer to special instructions/Safety data sheets.
- This material and its container must be disposed of as hazardous waste.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
bisphenol A/ epichlorohydrin resin, liquid	25068-38-6	30-60
bisphenol F/ epichlorohydrin copolymer	55492-52-9	0-10
2- ethylhexyl glycidyl ether	2461-15-6	0-10

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6471

Version No:2.0

CD 2010/1 Page 2 of 7

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- 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

- 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.

INHALED

- 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.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING

- 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.
- Use water delivered as a fine spray to control fire and cool adjacent area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 100 metres in all directions.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

•3Z

Personal Protective Equipment

Gas tight chemical resistant suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Environmental hazard - contain spillage.
- 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.

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6471

Version No:2.0

CD 2010/1 Page 3 of 7

Section 6 - ACCIDENTAL RELEASE MEASURES

MAJOR SPILLS

- Environmental hazard - contain spillage.

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.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- 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.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Glycidyl ethers:
 - may form unstable peroxides on storage in air, light, sunlight, UV light or other ionising radiation, trace metals - inhibitor should be maintained at adequate levels
 - may polymerise in contact with heat, organic and inorganic free radical producing initiators
 - may polymerise with evolution of heat in contact with oxidisers, strong acids, bases and amines
 - react violently with strong oxidisers, permanganates, peroxides, acyl halides, alkalis, ammonium persulfate, bromine dioxide.
 - Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- bisphenol A/ epichlorohydrin resin, liquid:
- bisphenol F/ epichlorohydrin copolymer:

CAS:25068- 38- 6 CAS:25085- 99- 8
CAS:55492- 52- 9 CAS:58421- 55- 9 CAS:9003-
36- 5
CAS:2461- 15- 6

- 2- ethylhexyl glycidyl ether:

PERSONAL PROTECTION

RESPIRATOR

Type A-P Filter of sufficient capacity

EYE

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

HANDS/FEET

- NOTE:
 - The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
 - Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
 - frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6471

Version No:2.0

CD 2010/1 Page 4 of 7

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- dexterity.
- When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butadiene rubber), boots and aprons.
- DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).
- DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

- General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White liquid with a slight odour; mixes with water.

PHYSICAL PROPERTIES

Liquid.
Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	20000- 30000 cSt@ 25°C
Boiling Range (°C)	>200	Solubility in water (g/L)	Miscible
Flash Point (°C)	>100 (PMCC)	pH (1% solution)	Not Available
Decomposition Temp (°C)	>200	pH (as supplied)	~7.0
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	<0.1 Pa @ 20C
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	1.0- 1.1
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
 - Product is considered stable.
 - Hazardous polymerisation will not occur.
- For incompatible materials - refer to Section 7 - Handling and Storage.*

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

- Irritating to eyes and skin.

CHRONIC HEALTH EFFECTS

- May cause SENSITISATION by skin contact.

TOXICITY AND IRRITATION

BISPHENOL F/ EPICHLOROHYDRIN COPOLYMER:

2-ETHYLHEXYL GLYCIDYL ETHER:

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

- Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

2-ETHYLHEXYL GLYCIDYL ETHER:

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

- for 1,2-butylene oxide (ethyloxirane):

Ethyloxirane increased the incidence of tumours of the respiratory system in male and female rats exposed via inhalation. Significant increases in nasal papillary adenomas and combined alveolar/bronchiolar adenomas and carcinomas were observed in male rats exposed to 1200 mg/m³ ethyloxirane via inhalation for 103 weeks.

- Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) exhibit many common characteristics with respect to animal toxicology. One such oxirane is ethyloxirane; data presented here may be taken as representative.

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6471

Version No:2.0

CD 2010/1 Page 5 of 7

Section 11 - TOXICOLOGICAL INFORMATION

TOXICITY
Oral (Rat) LD50: >5000 mg/kg

IRRITATION

BISPHENOL A/ EPICHLOROHYDRIN RESIN, LIQUID:

TOXICITY
Oral (rat) LD50: 11400 mg/kg

IRRITATION
Eye (rabbit): 100mg - Mild

BISPHENOL F/ EPICHLOROHYDRIN COPOLYMER:

■ The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

No significant acute toxicological data identified in literature search.

Data for liquid polymer, ie for molecular weights generally less than 700

CAUTION: Epoxy resin products may contain sensitising glycidyl ethers, even when these are not mentioned in the information given for the Limited animal studies have indicated that bisphenol A diglycidyl ethers may be potential carcinogens.

2-ETHYLHEXYL GLYCIDYL ETHER:

TOXICITY
Oral (rat) LD50: 7800 mg/kg

IRRITATION
Nil Reported

Section 12 - ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment.

Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
bisphenol A/ epichlorohydrin resin, liquid	HIGH		LOW	HIGH
2- ethylhexyl glycidyl ether	HIGH		LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

■ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION



■ Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

(a) packagings;

(b) IBCs; or

(c) any other receptacle not exceeding 500 kg(L).

- Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

Labels Required: MISCELLANEOUS

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6471

Version No:2.0

CD 2010/1 Page 6 of 7

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:

●3Z (ADG7)

ADG7:

Class or division:	9	Subsidiary risk:	None
UN No.:	3082	UN packing group:	III
Special provisions:	274; 331; 335	Packing Instructions:	None
Limited quantities:	5 L	Portable tanks and bulk containers - Instructions:	T4
Portable tanks and bulk containers - Special provisions:	TP1; TP29	Packagings and IBCs - Packing instruction:	P001; IBC03; LP01
Packagings and IBCs - Special packing provisions:	PP1		

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ epichlorohydrin resin, liquid)

Land Transport UNDG:

Class or division:	9	Subsidiary risk:	None
UN No.:	3082	UN packing group:	III

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ epichlorohydrin resin, liquid)

Air Transport IATA:

ICAO/IATA Class:	9	ICAO/IATA Subrisk:	None
UN/ID Number:	3082	Packing Group:	III

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. *(CONTAINS BISPHENOL A/ EPICHLOROXYDRIN RESIN, LIQUID)

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

S5

REGULATIONS

Regulations for ingredients

bisphenol A/ epichlorohydrin resin, liquid (CAS: 25068-38-6, 25085-99-8) is found on the following regulatory lists;

"Australia Hazardous Substances", "OECD Representative List of High Production Volume (HPV) Chemicals"

bisphenol F/ epichlorohydrin copolymer (CAS: 55492-52-9, 58421-55-9, 9003-36-5) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles"

No data for Lanko 531 Epoxy Moisture Barrier - Part A (CW: 23-6471)

No data for 2-ethylhexyl glycidyl ether (CAS: , 2461-15-6)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
2-ethylhexyl glycidyl ether	2461- 15- 6	Xn Carc3; R40 R52/53

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
bisphenol A/ epichlorohydrin resin, liquid	25068- 38- 6, 25085- 99- 8
bisphenol F/ epichlorohydrin copolymer	55492- 52- 9, 58421- 55- 9, 9003- 36- 5

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/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.

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART A

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6471

Version No:2.0

CD 2010/1 Page 7 of 7

Section 16 - OTHER INFORMATION

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 21-May-2010

Print Date: 21-May-2010

This is the end of the MSDS.

LANKO 531 EPOXY MOISTURE BARRIER - PART B

Chemwatch Independent Material Safety Data Sheet
Issue Date: 21-May-2010
C9317EC

CHEMWATCH 23-6472
Version No:2.0
CD 2010/1 Page 1 of 5

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

LANKO 531 EPOXY MOISTURE BARRIER - PART B

PRODUCT USE

- Used according to manufacturer's directions.
Part B or a 2-part epoxy moisture barrier.

SUPPLIER

Company: ParexDavco
Address:
67 Elizabeth Street
Wetherill Park
NSW, 2164
Australia
Telephone: +61 2 9616 3000
Emergency Tel: 1800 039 008
Fax: +61 2 9725 5551
Email: marketing@davco.com.au

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.

COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

POISONS SCHEDULE

S5

RISK

- Irritating to eyes and skin.
- May cause SENSITISATION by skin contact.

SAFETY

- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Wear eye/face protection.
- To clean the floor and all objects contaminated by this material use water.
- In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.
- If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
triethylenetetramine	112-24-3	1-9

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.

EYE

- 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

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART B

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6472

Version No:2.0

CD 2010/1 Page 2 of 5

Section 4 - FIRST AID MEASURES

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

FIRE FIGHTING

- 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.
- Use water delivered as a fine spray to control fire and cool adjacent area.

FIRE/EXPLOSION HAZARD

- Combustible.
 - Slight fire hazard when exposed to heat or flame.
 - Heating may cause expansion or decomposition leading to violent rupture of containers.
 - On combustion, may emit toxic fumes of carbon monoxide (CO).
- Combustion products include: carbon dioxide (CO₂), nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.

FIRE INCOMPATIBILITY

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM

None

PERSONAL PROTECTION

Glasses:
Chemical goggles.

Respirator:
Type AK- P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Small spills should be covered with inorganic absorbents and disposed of properly. Organic absorbents have been known to ignite when contaminated with amines in closed containers.
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.

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.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- DO NOT allow clothing wet with material to stay in contact with skin.
- 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.

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART B

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6472

Version No:2.0

CD 2010/1 Page 3 of 5

Section 7 - HANDLING AND STORAGE

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

■ for bulk storages:

- If slight coloration of the ethyleneamine is acceptable, storage tanks may be made of carbon steel or black iron, provided they are free of rust and mill scale. However, if the amine is stored in such tanks, color may develop due to iron contamination. If iron contamination cannot be tolerated, tanks constructed of types 304 or 316 stainless steel should be used. (Note: Because they are quickly corroded by amines, do not use copper, copper alloys, brass, or bronze in tanks or lines.)
- This product should be stored under a dry inert gas blanket, such as nitrogen, to minimize contamination resulting from contact with air and water.
- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- triethylenetetramine:

CAS:112- 24- 3

PERSONAL PROTECTION

RESPIRATOR

Type AK-P Filter of sufficient capacity

EYE

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

HANDS/FEET

■ NOTE:

- The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
 - Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
- frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.
 - When handling liquid-grade epoxy resins wear chemically protective gloves (e.g nitrile or nitrile-butadiene rubber), boots and aprons.
 - DO NOT use cotton or leather (which absorb and concentrate the resin), polyvinyl chloride, rubber or polyethylene gloves (which absorb the resin).
 - DO NOT use barrier creams containing emulsified fats and oils as these may absorb the resin; silicone-based barrier creams should be reviewed prior to use.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.

ENGINEERING CONTROLS

- General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Light yellow liquid with a mild odour; mixes with water.

PHYSICAL PROPERTIES

Liquid.

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART B

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6472

Version No:2.0

CD 2010/1 Page 4 of 5

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Mixes with water.

State	Liquid	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	65000- 110000 cSt@40°C
Boiling Range (°C)	>150	Solubility in water (g/L)	Miscible
Flash Point (°C)	>100 (PMCC)	pH (1% solution)	Not Available
Decomposition Temp (°C)	>200	pH (as supplied)	~10.0
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	0.97- 1.0
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

- Irritating to eyes and skin.

CHRONIC HEALTH EFFECTS

- May cause SENSITISATION by skin contact.

TOXICITY AND IRRITATION

- Not available. Refer to individual constituents.

TRIETHYLENETETRAMINE:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 2500 mg/kg

Dermal (rabbit) LD50: 805 mg/kg

IRRITATION

Skin (rabbit): 490 mg Open SEVERE

Skin (rabbit): 5 mg/24 SEVERE

Eye (rabbit): 49 mg - SEVERE

Eye (rabbit):20 mg/24 h - Moderate

- Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.<</>.

Handling ethyleneamine products is complicated by their tendency to react with other chemicals, such as carbon dioxide in the air, which results in the formation of solid carbamates. Because of their ability to produce chemical burns, skin rashes, and asthma-like symptoms, ethyleneamines also require substantial care in handling.

Because of the fragility of eye tissue, almost any eye contact with any ethyleneamine may cause irreparable damage, even blindness.

Triethylenetetramine (TETA) is a severe irritant to skin and eyes and induces skin sensitisation.

TETA is of moderate acute toxicity: LD50(oral, rat) > 2000 mg/kg bw, LD50(dermal, rabbit) = 550 - 805 mg/kg bw.

For alkyl polyamines:

The alkyl polyamines cluster consists of organic compounds containing two terminal primary amine groups and at least one secondary amine group. Typically these substances are derivatives of ethylenediamine, propylenediamine or hexanediamine. The molecular weight range for the entire cluster is relatively narrow, ranging from 103 to 232

Acute toxicity of the alkyl polyamines cluster is low to moderate via oral exposure and a moderate to high via dermal exposure.

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
triethylenetetramine	LOW		LOW	MED

continued...

LANKO 531 EPOXY MOISTURE BARRIER - PART B

Chemwatch Independent Material Safety Data Sheet

Issue Date: 21-May-2010

C9317EC

CHEMWATCH 23-6472

Version No:2.0

CD 2010/1 Page 5 of 5

Section 13 - DISPOSAL CONSIDERATIONS

■ Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: COMBUSTIBLE LIQUID, regulated under AS1940 for Bulk Storage purposes only.

HAZCHEM:

None (ADG7)

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

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

S5

REGULATIONS

Regulations for ingredients

triethylenetetramine (CAS: 112-24-3) is found on the following regulatory lists;

"Australia Hazardous Substances", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Lanko 531 Epoxy Moisture Barrier - Part B (CW: 23-6472)

Section 16 - OTHER INFORMATION

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/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.

This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.

Issue Date: 21-May-2010

Print Date: 21-May-2010

This is the end of the MSDS.