Kelmar ® Monobond 100 Resin - Part A

SECTION 1. IDENTIFICATION

Product Identifier	Kelmar ® Monobond 100 Resin - Part A
Other Means of Identification	N/A
Product Family	Epoxy Resins
Recommended Use	Industrial concrete coating.
Restrictions on Use	This product is designed as part of a system in 2 parts and must be mixed, according to manufacturer's instructions, with the appropriate partner product before use.
Manufacturer	R&D Technical Solutions Ltd., 7000 Davand Drive, Mississauga, ON, L5T 1J5, 905-795-9900, www.rdsolutions.ca
Emergency Phone No.	CANUTEC, 1-613-996-6666, 24 HR

SECTION 2. HAZARD IDENTIFICATION

Classification

Skin irritation - Category 2; Serious eye damage - Category 1; Skin sensitization - Category 1; Aquatic hazard (Chronic) - Category 2

Label Elements

Warning
Hazard Statement(s):
H315 + H320 Causes skin and eye irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
Precautionary Statement(s):
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands and skin thoroughly after handling.
P280 Wear protective gloves, protective clothing, eye protection, face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Propane, 2,2-bis[p-(2, 3-epoxypropoxy)phenyl]-, polymers	25085-99-8	60.0-80.0		
Propylene carbonate	108-32-7	10.0-30.0		
Cashew, nutshell extract, decarboxylated, distilled	8007-24-7	10.0-30.0		

Notes

Any concentration shown as a range is to protect confidentiality or due to batch variations.

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a Poison Centre or doctor.

Skin Contact

Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation or a rash occurs, get medical advice or attention. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present, after the initial 1-2 minutes and continue flushing for several additional minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Do not induce vomiting. If exposed or concerned, get medical advice or attention.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Target Organs

This product is unlikely to target specific organs. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

Do not use direct water stream - may cause fire to spread.

Specific Hazards Arising from the Product

Contain fire water runoff if possible - may cause environmental damage.
In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive phenols.

Special Protective Equipment and Precautions for Fire-fighters

Do NOT apply water directly to spill. Dike and recover contaminated water for appropriate disposal.
Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Non-emergency personnel: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Product (diluted as directed): do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. Minimize the use of water to prevent environmental contamination.

Methods and Materials for Containment and Cleaning Up

Contain and soak up spill with absorbent that does not react with spilled product. Suitable absorbents are: clay, dirt, sand, Milsorb® place used absorbent into suitable, covered, labelled containers for disposal. Contaminated absorbent poses the same hazard as the spilled product.

Other Information

Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Prevent all skin contact. Do not get in eyes, on skin or on clothing. Prevent contamination of surfaces that unprotected personnel may use. Avoid release to the environment. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Do NOT eat, drink or store food in work areas.

Conditions for Safe Storage

Store in an area that is: well-ventilated, dry.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Consult local authorities for provincial or state exposure limits.

Appropriate Engineering Controls

General ventilation is usually adequate. For large scale use of this product: use local exhaust ventilation, if general ventilation is not adequate to control amount in the air. Do not allow product to accumulate in the air in work or storage areas, or in confined spaces. Provide eyewash and safety shower if contact or splash hazard exists. Workers must use appropriate certified respirators when facing concentrations above the exposure limits.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles.

Skin Protection

Chemical-resistant, impervious gloves which comply with an approved standard should be worn at all times when handling. In case of an emergency (e.g. an uncontrolled release): wear chemical protective clothing e.g. gloves,

aprons, boots.
Butyl rubber, Silver Shield®, nitrile rubber, neoprene rubber, polyvinyl chloride.

Respiratory Protection

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Colourless - yellowish viscous liquid. Particle Size: Not available
Odour	faint
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not applicable (melting); Not available (freezing)
Initial Boiling Point/Range	~ 242 ºC (468 ºF) (Propylene carbonate)
Flash Point	> 135 ºC (275 ºF) (closed cup) (Propylene carbonate)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.132 at 20 ºC (68 ºF)
Solubility	Soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

Other Information

Physical State	Liquid
Molecular Formula	Not available
Molecular Weight	Not available
Bulk Density	Not available
Surface Tension	Not available
Critical Temperature	Not available
Electrical Conductivity	Not available
Vapour Pressure at 50 deg C	Not available
Saturated Vapour Concentration	Not available
VOC	<5 g/L - water

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use. Can undergo vigorous decomposition at temperatures above 350C.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Polymerizes in the presence of aliphatic amines.

Conditions to Avoid

Heat. Prolonged exposure to high temperatures. Temperatures above 300.0 ºC (572.0 ºF)

Incompatible Materials

Avoid contact with: oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide). Avoid unintended contact with amines.

Hazardous Decomposition Products

Can include, but not limited to: very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself. ATE values are calculated based on toxicity values of individual components of this product.

Likely Routes of Exposure

Skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Propane, 2,2-bis[p-(2, 3-epoxypropoxy)phenyl]-, polymers	Not applicable	> 15,000 mg/kg (rat)	23,000 mg/kg (rabbit)
Propylene carbonate	Not applicable	33520 mg/kg (rat)	> 2000 mg/kg (rabbit)
Cashew, nutshell extract, decarboxylated, distilled		> 2000 mg/kg (rat)	2000 mg/kg

LC50: Not applicable.

Oral ATEmix = 8937 mg/kg

Dermal ATEmix = 6287.12 mg/kg

Skin Corrosion/Irritation

May cause moderate or severe irritation based on information for closely related materials. (Cashew, nutshell extract, decarboxylated, distilled)

Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials. (Cashew, nutshell extract, decarboxylated, distilled) there is limited evidence of serious eye damage.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Exposure to vapour is minimal due to low volatility at room temperature. Exposure to heated vapours may cause irritation to the nose, throat or mucous membranes.

Skin Absorption

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Ingestion

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause dermatitis. Symptoms can include redness, rash, swelling and itching.

Respiratory and/or Skin Sensitization

No information was located for respiratory sensitization. Can cause an allergic reaction (skin sensitization) based on animal tests. In sensitized people, contact with a very small amount of product can cause an allergic reaction. Symptoms include redness, rash, itching and swelling. This reaction can spread from the hands or arms to the face and body. Repeated exposure will make the reaction worse.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Propane, 2,2-bis[p-(2, 3-epoxypropoxy)phenyl]-, polymers	Group 3	Not Listed	Not Listed	
Cashew, nutshell extract, decarboxylated, distilled	Not Listed		Not Listed	Not Listed

Not known to cause cancer.

Key to Abbreviations

IARC = International Agency for Research on Cancer. Group 3 = Not classifiable as to its carcinogenicity to humans.
ACGIH® = American Conference of Governmental Industrial Hygienists.
NTP = National Toxicology Program.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

May cause effects on sexual function and/or fertility.

Effects on or via Lactation

Not known to cause effects on or via lactation.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This product has not been tested. The toxicity value statements have been derived from the properties of individual components.

Ecotoxicity

May be harmful to aquatic life. Contains a substance which causes risk of hazardous effects to the environment.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Propane, 2,2-bis[p-(2, 3-epoxypropoxy)phenyl]-, polymers	2 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour; semi-static)	1.8 mg/L (Daphnia magna (water flea); 48-hour; static)	11 mg/L (Selenastrum capricornutum (algae); 72-hour; fresh water; static)	
Propylene carbonate	> 1000 mg/L (96-hour; semi-static)	> 1000 mg/L (Daphnia magna (water flea); 48-hour; static)		> 900 mg/L (72-hour; static)
Cashew, nutshell extract, decarboxylated, distilled	1000 mg/L			1300 mg/L

Persistence and Degradability

Expected not to degrade rapidly based on indirect evidence e.g. knowledge from structurally similar substances.

Bioaccumulative Potential

This product or its degradation products have the potential to bioaccumulate based on the fish bioconcentration factor (BCF). (Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers) fish Bioconcentration Factor: 100-3000.

Mobility in Soil

If released into the environment, this product is expected to move slowly through the soil, based on physical and chemical properties. (Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers) Koc = 500-2000.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recommended disposal methods are for the product, as sold. (Used material may contain other hazardous contaminants). The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN3082	Environmentally Hazardous Substance, Liquid N.O.S. (Epoxy Resin)	9	III
US DOT	UN3082	Environmentally Hazardous Substance, Liquid N.O.S. (Epoxy Resin)	9	III

Special Precautions Please note: ROAD/RAIL: Not regulated in packages 450 litres or less.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.

SECTION 16. OTHER INFORMATION

SDS Prepared By	Compliance & Documentation Coordinator
Phone No.	905-795-9900
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Revision Indicators	Not applicable.
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists IARC = International Agency for Research on Cancer NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Accelrys, Inc. Available from Canadian Centre for Occupational Health and Safety (CCOHS).
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