KELMAR® Dualox Resin - Part A

SECTION 1. IDENTIFICATION

Product Identifier	KELMAR® Dualox 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/Supplier Identifier	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; Eye irritation - Category 2A; Skin sensitization - Category 1B; Aquatic hazard (Chronic) - Category 2

Label Elements

Warning
Hazard Statement(s):
H315 + H320 Causes skin and eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.
Precautionary Statement(s):
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands and skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P280 Wear eye protection/face protection.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P315 Get immediate medical advice or attention.
Storage:
P402 + P404 Store in a dry place. Store in a closed container.
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
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	20-25	
Benzyl alcohol	100-51-6	1-4	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

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 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. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice or attention.

Ingestion

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

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. Closed containers may rupture violently when

heated releasing contents.
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

Evacuate area. Fight fire from a safe distance or a protected location.
Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials. Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

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. 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

Avoid repeated or prolonged skin contact. Do not get in eyes, on skin or on clothing. Prevent uncontrolled release of product. Do NOT eat, drink or store food in work areas. Wash hands thoroughly after handling this material. Immediately remove contaminated clothing using the method that minimizes exposure. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Conditions for Safe Storage

Store in an area that is: well-ventilated, dry, cool. Shelf life: Use within 24 months.

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. In a confined space: use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

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.
Butyl rubber, 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 organic vapour cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Colourless liquid.
Odour	faint
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not applicable (melting); Not available (freezing)
Initial Boiling Point/Range	> 100 ºC (212 ºF)
Flash Point	> 93 ºC (199 ºF)
Evaporation Rate	> 1 (n-butyl acetate = 1)
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	Not available
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (dynamic)

Other Information

Physical State	Liquid
VOC	2.1%

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Prolonged exposure to high temperatures.

Incompatible Materials

Polymerizes on contact with: amines (e.g. triethylamine), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Skin contact; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Propane, 2,2-bis[p-(2, 3-epoxypropoxy)phenyl]-, polymers	Not available	> 15,000 mg/kg (rat)	23,000 mg/kg (rabbit)
Benzyl alcohol	> 4.168 mg/L (rat) (4-hour exposure) (vapour)	1230 mg/kg (rat)	2000 mg/kg (rabbit)

Skin Corrosion/Irritation

Repeated or prolonged exposure can irritate or burn the skin. There is limited evidence of moderate or severe irritation. (Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers)

Serious Eye Damage/Irritation

There is limited evidence of mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Not harmful based on limited evidence.

Skin Absorption

Not harmful based on limited evidence.

Ingestion

If small amounts are swallowed not harmful.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Repeated and/or prolonged contact may cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).

Respiratory and/or Skin Sensitization

Skin sensitizer. Human experience shows an allergic skin reaction (skin sensitization) in rare cases following exposure at work. 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. Not known to be a respiratory sensitizer.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Propane, 2,2-bis[p-(2, 3-epoxypropoxy)phenyl]-, polymers	Group 3	Not Listed	Not Listed	
Benzyl alcohol	Not evaluated	Not Listed	Not Listed	

Not known to cause cancer.

Reproductive Toxicity

Development of Offspring

Not known to harm the unborn child.

Sexual Function and Fertility

Conclusions cannot be drawn from the limited studies available.

Effects on or via Lactation

Not known to cause effects on or via lactation.

Germ Cell Mutagenicity

Not known to be a mutagen.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Studies were not located. 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)	
Benzyl alcohol	460 mg/L (Pimephales promelas (fathead minnow); 96-hour)	230 mg/L (Daphnia magna (water flea); 48-hour)		700 mg/L (Pseudokirchneriella subcapitata (algae); 72-hour; static)

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Benzyl alcohol	51 mg/L (Daphnia magna (water flea); 21-day)			

Persistence and Degradability

Does not degrade rapidly based on quantitative tests. (Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers)

Bioaccumulative Potential

This product or its degradation products have the potential to bioaccumulate based on quantitative structure-activity relationships.

Mobility in Soil

If released into the environment, this product is expected to move slowly through the soil, based on physical and chemical properties.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. 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.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

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

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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
Date of Preparation	April 29, 2016
Date of Last Revision	May 26, 2016
Revision Indicators	The following SDS content was changed on April 29, 2016: Section 11 - Toxicological Information; LC50/LD50 values.
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 RTECS® = Registry of Toxic Effects of Chemical Substances 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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