Kelmar® RC Resin (Part A)

SECTION 1. IDENTIFICATION

Product Identifier	Kelmar® RC Resin (Part A)
Other Means of Identification	N/A
Product Family	Epoxy Resins
Recommended Use	A resurfacing and repair compound for concrete.
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
Date of Preparation	July 12, 2017

SECTION 2. HAZARD IDENTIFICATION

Classification

Skin irritation - Category 2; Eye irritation - Category 2A; Skin sensitization - Category 1; Germ cell mutagenicity - Category 1; Reproductive toxicity - Category 2; Specific target organ toxicity (repeated exposure) - Category 2; Aquatic hazard (Acute) - Category 1; Aquatic hazard (Chronic) - Category 1

Label Elements

Signal Word:
Danger
Hazard Statement(s):

P262	Do not get in eyes, on skin, or on clothing.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H340	May cause genetic defects.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs (nervous system, skin) through prolonged or repeated exposure following skin contact.

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.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P362 + P364	Take off contaminated clothing and wash it before reuse.
P333 + P313	If skin irritation or rash occurs: Get medical advice or attention.
P308 + P313	IF exposed or concerned: 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.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P311 Call a POISON CENTRE or doctor.
P314 Get medical advice/attention if you feel unwell.
P273 Avoid release to the environment.
Storage:
P210 Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
P233 Keep container tightly closed.
P235 Keep cool.
P240 Ground/bond container and receiving equipment.
Disposal:
P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	77-86	
4-Nonylphenol, branched (mixed isomers)	84852-15-3	0-3	
Benzyl alcohol	100-51-6	7.5-9.0	

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

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. 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. Get medical advice or attention if you feel unwell or are concerned. If skin irritation or a rash occurs, get medical advice or attention.

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. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. 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

If on skin: repeated or prolonged exposure can irritate or burn the skin. Skin sensitizer. May cause an allergic skin reaction in some people. 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.

Immediate Medical Attention and Special Treatment

Target Organs

Skin, nervous system.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Use water to keep non-leaking, fire-exposed containers cool.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Closed containers may rupture violently when heated releasing contents. 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.

Special Protective Equipment and Precautions for Fire-fighters

No special precautions are necessary. Dike and recover contaminated water for appropriate disposal. Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.
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

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. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

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

Small spills or leaks: stop or reduce leak if safe to do so. 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. Large spills or leaks: remove or recover liquid using pumps or vacuum equipment. Store recovered product in suitable containers that are: tightly-covered. Review Section 13 (Disposal Considerations) of this safety data sheet.

Other Information

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

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not breathe in this product. Do not get in eyes, on skin or on clothing. Avoid repeated or prolonged skin contact with product or with contaminated equipment/surfaces. Avoid release to the environment. Prevent accidental contact with incompatible chemicals. Keep containers tightly closed when not in use or empty. Do NOT eat, drink or store food in work areas.

Conditions for Safe Storage

Store in an area that is: well-ventilated, secure and separate from work areas. Restrict access to authorized personnel only. Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult local authorities for provincial or state exposure limits.

Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.
Suitable materials are: neoprene rubber, nitrile rubber. Chemical-resistant, imperious gloves complying with an approved standard should be worn at all times when handling.

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	Various colours viscous liquid. Particle Size: Not applicable
Odour	Aromatic (Benzyl alcohol)
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not applicable (melting); Not available (freezing)
Initial Boiling Point/Range	205.4 - 205.7 ºC (401.7 - 402.3 ºF) (Benzyl alcohol)
Flash Point	>= 100 ºC (212 ºF) (method not specified)
Evaporation Rate	Not available
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)	1.17 at 20 ºC (68 ºF)
Solubility	Practically insoluble in water; Highly soluble in aromatic hydrocarbons (e.g. toluene).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	~ 2000 centipoises at 20 ºC (68 ºF) (dynamic)

Other Information

Physical State	Liquid
Molecular Formula	Not available
Bulk Density	Not available
Surface Tension	Not available
Critical Temperature	Not available
Saturated Vapour Concentration	Not available
Other Physical Property 1	VOC = 9.3%

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use. Heating may cause an explosion. 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

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

Hazardous Decomposition Products

None known.

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; inhalation; eye contact.

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)
Benzyl alcohol	> 4.168 mg/L (rat) (4-hour exposure) (vapour)	1230 mg/kg (rat)	2000 mg/kg (rabbit)
4-Nonylphenol, branched (mixed isomers)		1412 mg/kg (rat)	2140 mg/kg (rabbit)

ATE(inhalation) > 8.3 mg/l

Oral ATEmix = 7755.27 mg/kg

Dermal ATEmix = 12243.63 mg/kg

Skin Corrosion/Irritation

There is limited evidence of mild irritation. (Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers) there is limited evidence of skin corrosion. (4-Nonylphenol, branched (mixed isomers))

Serious Eye Damage/Irritation

May irritate or burn the eyes. Permanent damage including blindness may result. Contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result. (4-Nonylphenol, branched (mixed isomers))

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause nose and throat irritation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Skin Absorption

May cause thermal burns. (4-Nonylphenol, branched (mixed isomers))

Ingestion

May cause severe irritation or burns to the mouth, throat and stomach. If large amounts are swallowed may cause

depression of the central nervous system. (Benzyl alcohol) symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause dermatitis. Symptoms can include redness, rash, swelling and itching. May cause damage to organs based on animal studies. (4-Nonylphenol, branched (mixed isomers)) may cause effects on the central nervous system.

Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Can cause an allergic reaction (skin sensitization) based on animal tests. Human experience shows an allergic skin reaction (skin sensitization) in rare cases following exposure at work. Sensitization may occur following exposure to the liquid or vapour. 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	
Benzyl alcohol	Not evaluated	Not Listed	Not Listed	
4-Nonylphenol, branched (mixed isomers)	Group 3			

Not known to cause cancer. Conclusions cannot be drawn from the limited studies available.

Reproductive Toxicity

Development of Offspring

May cause effects on the unborn child based on limited evidence. However, these effects are only seen with significant toxicity in the mothers. (4-Nonylphenol, branched (mixed isomers))

Sexual Function and Fertility

May cause effects on sexual function and/or fertility based on limited evidence.

Effects on or via Lactation

Does not cause effects on or via lactation.

Germ Cell Mutagenicity

May be mutagenic based on limited evidence. (4-Nonylphenol, branched (mixed isomers))

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life, based on acute toxicity tests.

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)

4-Nonylphenol, branched (mixed isomers)	0.128 mg/L (96-hour; flow-through)	0.085 mg/L (Daphnia magna (water flea); 48-hour; static)	1.3 mg/L (Desmodesmus subspicatus (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 the fish bioconcentration factor (BCF). (Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers)

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)

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. 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.

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. ((Resin Solution))	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	July 12, 2017
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Revision Indicators	The following SDS content was changed on July 12, 2017: SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS; Ingredient Information.
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists NIOSH = National Institute for Occupational Safety and Health OSHA = US Occupational Safety and Health Administration IARC = International Agency for Research on Cancer
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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