

## KELMAR® 1920 Hardener - Part B

### SECTION 1. IDENTIFICATION

<b>Product Identifier</b>	KELMAR® 1920 Hardener - Part B
<b>Other Means of Identification</b>	N/A
<b>Product Family</b>	Epoxy Hardeners
<b>Recommended Use</b>	Industrial concrete coating.
<b>Restrictions on Use</b>	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.
<b>Manufacturer/Supplier Identifier</b>	R&D Technical Solutions Ltd., 7000 Davand Drive, Mississauga, ON, L5T 1J5, 905-795-9900, <a href="http://www.rdsolutions.ca">www.rdsolutions.ca</a>
<b>Emergency Phone No.</b>	CANUTEC, 1-613-996-6666, 24 HR
<b>Date of Preparation</b>	June 04, 2018

### SECTION 2. HAZARD IDENTIFICATION

#### Classification

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Skin corrosion - Category 1; Serious eye damage - Category 1; Skin sensitization - Category 1; Reproductive toxicity - Category 1B; Reproductive toxicity - Effects on or via lactation; Aquatic hazard (Acute) - Category 3; Aquatic hazard (Chronic) - Category 3

#### Label Elements



Danger

Hazard Statement(s):

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H360 May damage fertility or the unborn child.

H362 May cause harm to breast-fed children.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statement(s):

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P263 Avoid contact during pregnancy and while nursing.

P264 Wash hands and skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P312 Call a POISON CENTRE or doctor if you feel unwell.

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

P333 + P313 If skin irritation or rash occurs: Get medical advice or 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.

P310 Immediately call a POISON CENTRE or doctor.

P362 + P364 Take off contaminated clothing and wash it before reuse.

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
Cashew, nutshell liq.	8007-24-7	30.0-60.0		
Triethylenetetramine	112-24-3	10.0-30.0		
Aminoethylethanolamine	111-41-1	5.0-10.0		
Polypropylene glycol, liquids	25322-69-4	1.0-5.0		
Morpholine, 4-aminopropyl-	123-00-2	1.0-5.0		
N-(2-Aminoethyl)piperazine	140-31-8	0.1-1.0		
Tetraethylenepentamine	112-57-2	0.1-1.0		
Diethylenetriamine	111-40-0	0.1-1.0		

#### Notes

The specific chemical identity and/or exact percentage of composition (concentration) has been withheld as a trade secret.

## 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.

#### Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse with lukewarm, gently flowing water for 5 minutes. If skin irritation occurs, get medical advice or attention. Call a Poison Centre or doctor if you feel unwell.

#### Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Centre or doctor.

#### Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again. Call a Poison Centre or doctor if you feel unwell.

### Most Important Symptoms and Effects, Acute and Delayed

Repeated or prolonged exposure can irritate or burn the skin. Symptoms include pain, redness, and swelling. May cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

### Immediate Medical Attention and Special Treatment

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### 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

Dermatitis, skin allergies.

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire. 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. During a fire, smoke may contain the original material in addition to combustion products which may be toxic and/or irritating.

### Special Protective Equipment and Precautions for Fire-fighters

No special precautions are necessary.

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

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel.

### 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. Suitable absorbents are: clay, dirt, sand, Milsorb®.

### Other Information

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

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Do not get in eyes, on skin or on clothing. Avoid exposure during pregnancy and while nursing. Only use where there is adequate ventilation. Avoid generating vapours or mists. Prevent accidental contact with incompatible chemicals. General hygiene considerations: do NOT eat, drink or store food in work areas.

### Conditions for Safe Storage

Store in an area that is: cool, well-ventilated. Store in the original, labelled, shipping container.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Not available.

This product has not been tested.

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## Appropriate Engineering Controls

General ventilation is usually adequate. 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 and face shield when contact is possible.

### Skin Protection

Chemical-resistant, impervious gloves which comply with an approved standard should be worn at all times when handling. Wear chemical protective clothing e.g. gloves, aprons, boots.

Neoprene rubber, butyl rubber, polyvinyl chloride.

### Respiratory Protection

Not usually required when working with small quantities. 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	Yellowish liquid.
Odour	amine-like
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	$\geq 112.8^{\circ}\text{C}$ ( $235.0^{\circ}\text{F}$ )
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable (liquid).
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)	0.955
Solubility	Practically insoluble 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 (kinematic); Not available (dynamic)
Other Information	
Physical State	Liquid
VOC	<5g/l - water

## 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

Open flames, sparks, static discharge, heat and other ignition sources.

## Incompatible Materials

Releases excessive heat on contact with: water. Avoid contact with: alcohols (e.g. ethanol), strong acids (e.g. hydrochloric acid), aromatic hydrocarbons (e.g. toluene), ketones (e.g. acetone). Avoid contact with: absorbent materials such as ground corn cobs moist organic absorbents peat moss sawdust.

## Hazardous Decomposition Products

Can include, but not limited to: corrosive, flammable ammonia; very toxic carbon monoxide, carbon dioxide. volatile amines.

# SECTION 11. TOXICOLOGICAL INFORMATION

## Likely Routes of Exposure

Skin contact; eye contact; ingestion.

## Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Cashew, nutshell liq.		500 mg/kg (rat)	> 2000 mg/kg
Polypropylene glycol, liquids		1100 mg/kg (rat)	1555 mg/kg (rabbit)
Triethylenetetramine	Not available	1716 mg/kg (rat)	1465 mg/kg (rabbit)
Aminoethylethanolamine	51.3 mg/m3 (rat) (vapour)	~ 2000 mg/kg (rat)	> 2000 mg/kg (rabbit)

Exposure to vapour is minimal due to low volatility at room temperature. Based on available data, the classification criteria are not met.

Oral ATEmix = 859.6 mg/kg

Dermal ATEmix = 1690.11 mg/kg

## Skin Corrosion/Irritation

Human experience and animal tests show moderate or severe irritation. There is limited evidence of skin corrosion. Contact can cause pain, redness, burns, and blistering. Permanent scarring can result.

## Serious Eye Damage/Irritation

Human experience and animal tests show serious eye irritation. Symptoms include sore, red eyes, and tearing. May irritate or burn the eyes. Permanent damage including blindness may result.

## STOT (Specific Target Organ Toxicity) - Single Exposure

### Inhalation

May be harmful based on limited evidence. May cause severe nose and throat irritation.

### Skin Absorption

Prolonged or widespread skin contact may result in absorption of potentially harmful amounts.

### Ingestion

May cause severe irritation or burns to the mouth, throat and stomach.

## Aspiration Hazard

May cause lung damage if aspirated based on existing animal tests and physical and chemical properties.

## STOT (Specific Target Organ Toxicity) - Repeated Exposure

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

## Respiratory and/or Skin Sensitization

Not known to be a respiratory sensitizer. Skin sensitizer. 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

Not known to cause cancer.

## Reproductive Toxicity

### Development of Offspring

May harm the unborn child. Has been associated with: birth defects, death.

### Sexual Function and Fertility

May cause effects on sexual function and/or fertility. Contains components which have been shown to interfere with fertility, in animal studies.

### Effects on or via Lactation

No information was located.

## Germ Cell Mutagenicity

Not known to be a mutagen.

## 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 cause long lasting harmful effects 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
Cashew, nutshell liq.	1000 mg/L			1300 mg/L
Polypropylene glycol, liquids	> 100 mg/L (96-hour)	15 mg/L (Daphnia magna (water flea); 48-hour)		
Triethylenetetramine	330 mg/L (Pimephales promelas (fathead minnow); 96-hour; static)	31.1 mg/L (Daphnia magna (water flea); 48-hour; static)	20 mg/L (Pseudokirchneriella subcapitata (algae); 72-hour; semi-static)	

### Persistence and Degradability

No information was located.

### Bioaccumulative Potential

No information was located.

### Mobility in Soil

No information was located.

### Other Adverse Effects

There is no information available.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

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. Empty containers retain product residue. Follow label warnings even if container appears to be empty.

## SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN2735	Amines, Liquid, Corrosive N.O.S. (Aliphatic Amine Blend)	8	III
US DOT	UN2735	Amines, Liquid, Corrosive N.O.S. (Aliphatic Amine Blend)	8	III
IMO (Marine)	UN2735	Amines, Liquid, Corrosive N.O.S. (Aliphatic Amine Blend)	8	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

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**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

**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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