

Kelmar® TE Hardener - Part B

SECTION 1. IDENTIFICATION

Product Identifier	Kelmar® TE Hardener - Part B
Other Means of Identification	N/A
Product Family	Epoxy Hardeners
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

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Acute toxicity (Inhalation) - Category 2; Skin corrosion - Category 1B; Serious eye damage - Category 1; Skin sensitization - Category 1; Germ cell mutagenicity - Category 1B; Carcinogenicity - Category 1A; Reproductive toxicity - Category 1B; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 1; Aquatic hazard (Acute) - Category 3

Label Elements



Danger

Hazard Statement(s):

H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility.

Precautionary Statement(s):

P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust, fume, gas, mist, vapours or spray.
P264	Wash hands and skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310	Immediately call a POISON CENTRE or doctor.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

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

P363 Wash contaminated clothing before reuse.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Causes skin irritation in the presence of sunlight/UV rays.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Coal tar pitch	65996-93-2	75-90	
Diethylenetriamine	111-40-0	10-20	
Carbon black	1333-86-4	<1.0	

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

Move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. If breathing has stopped, trained personnel should begin rescue breathing. Call a Poison Centre or doctor 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). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs, get medical advice or attention. Call a Poison Centre or doctor if you feel unwell. 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. If a contact lens is present, DO NOT delay flushing or attempt to remove the lens. 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. Immediately call a Poison Centre or doctor.

Ingestion

Rinse mouth with water. Do not induce vomiting. If vomiting occurs naturally, lie on your side in the recovery position. Rinse mouth with water again. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the Poison Centre or doctor. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

Can cause severe irritation of the nose and throat. Can cause severe lung injury. Can harm the kidneys. Can harm the liver. Repeated or prolonged exposure can irritate the skin.

Immediate Medical Attention and Special Treatment

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Target Organs

Skin, liver, kidneys, respiratory system.

Special Instructions

Some jurisdictions specifically regulate an ingredient of this product and require a complete medical surveillance program. Specific information should be sought from the appropriate government agency in your jurisdiction. (Coal tar pitch)

Medical Conditions Aggravated by Exposure

None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media**Suitable Extinguishing Media**

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

Unsuitable Extinguishing Media

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

Specific Hazards Arising from the Product

Can ignite if strongly heated. Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

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

Review Section 7 (Handling) of this safety data sheet before proceeding with clean-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. 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

Prevent all skin contact. Wear personal protective equipment to avoid direct contact with this chemical. Do not get in eyes, on skin or on clothing. Do not swallow. Only use where there is adequate ventilation. Avoid release to the environment. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Avoid heating that will increase the amount of vapours. If product is transferred to another container, ensure new container is suitable for the product. Keep containers tightly closed when not in use or empty. Do NOT smoke in work areas. Do NOT eat,

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drink or store food in work areas. See Section 13 (Disposal Considerations) of this safety data sheet.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated. Restrict access to authorized personnel only. Store in the original, labelled, shipping container. Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Coal tar pitch	0.2 mg/m3		0.2 mg/m3			
Diethylenetriamine	1 ppm		4 mg/m3			

Appropriate Engineering Controls

The hazard potential of this product is relatively low. 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. Use stringent control measures such as process enclosure to prevent product release into the workplace. 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: butyl rubber, neoprene rubber, nitrile rubber.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Black viscous liquid.
Odour	Irritating (Coal tar pitch)
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	~ 100 °C (212 °F) (Coal tar pitch)
Flash Point	> 93 °C (199 °F)
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)	> 1
Relative Density (water = 1)	1.165
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)

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Other Information

Physical State

Liquid

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

High temperatures. Prolonged exposure to high temperatures.

Incompatible Materials

Reacts violently with: strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Can include, but not limited to: corrosive, oxidizing nitrogen oxides; very toxic carbon monoxide, carbon dioxide; corrosive sulfur oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself.

Likely Routes of Exposure

Skin contact; skin absorption; inhalation; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Coal tar pitch		> 15000 mg/kg	> 2000 mg/kg
Diethylenetriamine	> 0.07-0.3 mg/L (rat) (4-hour exposure) (mist)	> 1620 mg/kg (rat)	1045-1090 mg/kg (rabbit)

Skin Corrosion/Irritation

May burn the skin. Permanent scarring may result. (Diethylenetriamine) contact can cause pain, redness, burns, and blistering. Permanent scarring can result. Causes skin irritation in the presence of sunlight/UV rays.

Serious Eye Damage/Irritation

May irritate or burn the eyes. Permanent damage including blindness may result. The vapour also irritates the eyes.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause severe lung injury, harmful effects on the kidneys. Kidney function tests may show abnormal results. Harmful effects on the liver.

Skin Absorption

May be harmful based on human experience and animal tests. (Coal tar pitch)

Ingestion

May cause irritation of the mouth, throat and stomach.

Aspiration Hazard

(Diethylenetriamine) may be drawn into the lungs (aspirated) if swallowed or vomited.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above. May cause harmful effects on the kidneys, harmful effects on the liver.

Respiratory and/or Skin Sensitization

No information was located for respiratory sensitization. Can cause an allergic reaction (skin sensitization) based on

animal tests. (Diethylenetriamine) 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
Coal tar pitch	Group 1	A1	Known carcinogen	

May cause cancer. Has been associated with: bladder cancer, kidney cancer, lung cancer, skin cancer. IARC: Group 1 – Carcinogenic to humans. ACGIH®: A1 – Confirmed human carcinogen. NTP: Known human carcinogen.

Reproductive Toxicity

Development of Offspring

May harm the unborn child.

Sexual Function and Fertility

May cause effects on sexual function and/or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

May be mutagenic based on limited evidence. (Coal tar pitch)

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

Studies were not located.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Coal tar pitch	128 mg/L	> 100 mg/L (Daphnia magna (water flea); 48-hour)	220 mg/L (Desmodesmus subspicatus (algae); 72-hour)	
Diethylenetriamine	430 mg/L (96-hour; semi-static)	16 mg/L (Daphnia magna (water flea); 48-hour; static)		1164 mg/L (Pseudokirchneriella subcapitata (algae); 72-hour; static)

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Coal tar pitch	4 mg/L		> 100 mg/L (Daphnia magna (water flea); 21-day)	
Diethylenetriamine	> 10 mg/L (28-day; semi-static)		5.6 mg/L (Daphnia magna (water flea); 21-day; semi-static)	

Persistence and Degradability

Considered not to degrade rapidly, because no data regarding degradability are available.

Bioaccumulative Potential

The product has potential for bioaccumulation.

Mobility in Soil

If released into the environment, this product is not expected to move through the soil, based on physical and chemical properties.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

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. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. Dispose of or recycle empty containers through an approved waste management facility.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	1760	Corrosive Liquids, N.O.S. (Diethylenetriamine)	8	III

Environmental Hazards Not applicable

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	May 18, 2017
Date of Last Revision	May 18, 2017
Revision Indicators	The following SDS content was changed on May 18, 2017: SECTION 2. HAZARD IDENTIFICATION; Classification. SECTION 11. TOXICOLOGICAL INFORMATION; Acute Toxicity; STOT (Specific Target Organ Toxicity) - Repeated Exposure.
Key to Abbreviations	NTP = National Toxicology Program IARC = International Agency for Research on Cancer ACGIH® = American Conference of Governmental Industrial Hygienists RTECS® = Registry of Toxic Effects of Chemical Substances
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances

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(RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).

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