SAFETY DATA SHEET

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1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product Name KEY TOUGH-COAT E90-78

Other means of identification
Product Code(s) TOUGH-COAT E90-78
Product Technology Polyurethane
Document Tough-Coat E90-78
None
Manufacturer Address
Key Polymer Holdings, LLC
17 Shepard Street
Lawrence, MA 01843, USA
Company Phone Number 978-683-9411 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours)

2. Hazards Identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3

Emergency Overview

DANGER

Hazard statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May damage fertility or the unborn child
May cause respiratory irritation. May cause drowsiness or dizziness

Appearance Hazy Light yellow **Physical state** Liquid **Odor** Mild amine odor

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust, fumes, or vapors
Contaminated work clothing should not be allowed out of the workplace
Use only outdoors or in a well-ventilated area
Wear protective gloves, protective clothing, eye protection, face protection

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: 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/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Keep from freezing

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

Other Information

3. Composition/Information on Ingredients

Substance

Chemical name	CAS No.	Weight-%	Trade secret
1-Methyl-2-pyrrolidinone	872-50-4	1 - 10	*
Triethylamine	121-44-8	1 - 5	*
Proprietary polyurethane modifier	Proprietary	0.1 - 0.5	*
Proprietary polyurethane modifier	Proprietary	0.1 - 0.5	*

* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

Description of first aid measures

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call

a physician immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Get medical attention if irritation develops and persists.

Inhalation Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult. Seek immediate medical attention/advice.

Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction. Drowsiness. Dizziness. Irritation. Pre-existing skin problems may be aggravated by prolonged or repeated contact.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media
Dry chemical, CO2, alcohol-resistant foam or water spray

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
Material will not burn until water has been evaporated. Container may rupture on heating. When heated, hazardous gases may be released. See Section 10 for additional information.

Hazardous combustion products Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information. Do not allow into any sewer, on the ground or into any body of water.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Avoid breathing vapors or mists. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Ensure adequate ventilation, especially in confined areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep from freezing. Keep container tightly closed in a dry and well-ventilated place.

Incompatible materials Strong acids. Strong oxidizing agents. Strong reducing agents.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Triethylamine 121-44-8	STEL: 1 ppm TWA: 0.5 ppm S*	TWA: 25 ppm TWA: 100 mg/m^3 (vacated) TWA: 10 ppm (vacated) TWA: 40 mg/m^3 (vacated) STEL: 15 ppm (vacated) STEL: 60 mg/m^3	IDLH: 200 ppm

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective nitrile rubber gloves. Wear protective butyl rubber gloves. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Hazy	**Odor**	Mild amine odor
Color	Light yellow	**Odor threshold**	N/A

Property	Values	Remarks • Method
pH	8.0	

Melting point / freezing point	N/A
Boiling point / boiling range	100 °C
Flash point	N/A
Evaporation rate	N/A
Flammability (solid, gas)	N/A
Flammability Limit in Air	
Upper flammability limit:	N/A
Lower flammability limit:	N/A
Vapor pressure	<1
Vapor density	N/A
Relative density	1.0
Water solubility	Dispersible
Solubility in other solvents	N/A
Partition coefficient	N/A
Autoignition temperature	N/A
Decomposition temperature	N/A
Kinematic viscosity	N/A
Dynamic viscosity	200 cps @ 25° C
Explosive properties	N/A
Oxidizing properties	N/A

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	8.3 pounds per gallon
Bulk density	N/A

10. Stability and Reactivity

Reactivity

No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Freezing temperatures.

Incompatible materials
Strong acids. Strong oxidizing agents. Strong reducing agents.

Hazardous decomposition products
Carbon oxides. Hydrocarbons. Nitrogen oxides (NOx).

11. Toxicological Information

Information on likely routes of exposure

Product Information	The product has not been tested
Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact	Moderately irritating to the eyes.
Skin contact	May cause sensitization by skin contact. Causes skin irritation.

Ingestion Not an expected route of exposure. Swallowing may result in irritation and corrosion of the mouth, throat and digestive tract.

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
1-Methyl-2-pyrrolidinone 872-50-4	= 3914 mg/kg (Rat)	= 8 g/kg (Rabbit)	> 5.1 mg/L (Rat) 4 h
Triethylamine 121-44-8	= 460 mg/kg (Rat)	= 415 mg/kg (Rabbit) = 570 µL/kg (Rabbit)	= 1250 ppm (Rat) 4 h

Information on toxicological effects

N/A.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause sensitization by skin contact.
Germ cell mutagenicity N/A.
Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity Product is or contains a chemical which is a known or suspected reproductive hazard.
STOT - single exposure May cause disorder and damage to the. Eyes. Kidney. Liver. Central nervous system. Central Vascular System (CVS).
STOT - repeated exposure N/A.
Aspiration hazard N/A.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 11,733.00 mg/kg
ATEmix (dermal) 26,866.90 mg/kg
ATEmix (inhalation-dust/mist) 27.50 mg/l
ATEmix (inhalation-vapor) 162.94 mg/l

12. Ecological Information

Ecotoxicity

N/A
0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
1-Methyl-2-pyrrolidinone 872-50-4	500: 72 h Desmodesmus subspicatus mg/L EC50	1072: 96 h Pimephales promelas mg/L LC50 static 832: 96 h Lepomis macrochirus mg/L LC50 static 1400: 96 h Poecilia reticulata mg/L LC50 static 4000: 96 h Leuciscus idus mg/L LC50 static	4897: 48 h Daphnia magna mg/L EC50
Triethylamine 121-44-8		43.7: 96 h Pimephales promelas mg/L LC50 static	200: 48 h Daphnia magna mg/L EC50

Persistence and degradability
N/A

Chemical name	Partition coefficient
1-Methyl-2-pyrrolidinone 872-50-4	-0.46
Triethylamine 121-44-8	1.45

Other adverse effects
N/A

13. Disposal Considerations

Waste treatment methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Triethylamine 121-44-8	U404	Included in waste streams: K156, K157		U404

14. Transport Information

DOT Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

15. Regulatory Information

International Inventories

TSCA All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act. The polymer in this product is subject to a TSCA Significant New Use Rule (SNUR) under 40 CFR 721.10381.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No.	Weight-%	SARA 313 - Threshold Values %
1-Methyl-2-pyrrolidinone - 872-50-4	872-50-4	1 - 10	1.0
Triethylamine - 121-44-8	121-44-8	1 - 5	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances

Triethylamine 121-44-8	5000 lb			X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Triethylamine 121-44-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
1-Methyl-2-pyrrolidinone - 872-50-4	Developmental
ethanol - 64-17-5	Carcinogen Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
1-Methyl-2-pyrrolidinone 872-50-4	X	X	X
Triethylamine 121-44-8	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

Prepared By Key Polymer Corp Compliance
Issuing Date 09-Jul-2019
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Revision Note

N/A

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet