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Version 8

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

Product Identifier

Product name KEY EC1055B

Other Means of Identification

Product Code EC1055B
UN/ID no UN3066
Product Technology Epoxy B side
None

Curing chemical. FOR INDUSTRIAL USE ONLY.
Restrictions on use: Do not use this product for any use other than intended

Manufacturer Address

Key Polymer Corporation
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)

Chemtrec International Phone +1 703-527-3887

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Subcategory Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive Toxicity	Category 2

EMERGENCY OVERVIEW

DANGER

Hazard Statements

Harmful if swallowed
 Harmful in contact with skin
 Harmful if inhaled
 Causes severe skin burns and eye damage
 May cause an allergic skin reaction
 Suspected of damaging fertility or the unborn child



Appearance Clear Yellow

Physical State Liquid

Odor Amine

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves, protective clothing, eye protection, face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust, fumes, or vapors
 In case of inadequate ventilation wear respiratory protection
 Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 If skin irritation or rash occurs: Get medical advice/attention
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/regional/international regulations

Hazards Not Otherwise Classified (HNOC)

Other Information

Very toxic to aquatic life with long lasting effects, Very toxic to aquatic life
 10.95% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

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

Chemical Family Epoxy B Side

Chemical Name	CAS No	Weight-%	Trade secret
Proprietary amine	Proprietary	20.0 - 30.0	*
Phenol, 4-nonyl-, branched	84852-15-3	15.0 - 25.0	*
benzyl alcohol	100-51-6	10.0 - 15.0	*
m-Xylylenediamine	1477-55-0	10.0 - 15.0	*

Nonylphenol	25154-52-3	3.0 - 8.0	*
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* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

FIRST AID MEASURES

General Advice	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician. Wash contaminated clothing before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult. If symptoms persist, call a physician.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.
Self-Protection of the First Aider	First Aider: Pay attention to self-protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms May cause allergic skin reaction.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Foam, Dry Chemical, Carbon Dioxide (CO₂);

Unsuitable Extinguishing Media Water reactive.

Specific Hazards Arising From the Chemical

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous Combustion Products Carbon oxides; Nitrogen oxides (NO_x). Ammonia.

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.

Other Information Use personal protective equipment as required.

For Emergency Responders Use personal protective equipment as required.

Environmental Precautions

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

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 Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Do not reuse container. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Incompatible Materials Acids; Bases; Strong oxidizing agents; Water.

8. Exposure Controls/Personal Protection

Control Parameters

Exposure Guidelines Independent laboratory test results confirm that exposure to chemical hazards are well below the OSHA permissible exposure limits when this product is used as recommended.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
m-Xylylenediamine 1477-55-0	S* Ceiling: 0.1 mg/m ³	(vacated) S* (vacated) Ceiling: 0.1 mg/m ³	Ceiling: 0.1 mg/m ³

Appropriate Engineering Controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual Protection Measures, Such As Personal Protective Equipment

Eye/Face Protection Splash Goggles. Avoid contact with eyes.

Skin and Body Protection 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	Odor	Amine
Appearance	Clear	Odor Threshold	No information available
Color	Yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting Point/Freezing Point	No information available	
Boiling Point/Boiling Range	> 198 °C	
Flash Point	> 120 °C	CC (closed cup)
Evaporation Rate	Nil	
Flammability (Solid, Gas)	No information available	
Flammability Limits in Air		
Upper Flammability Limits	No information available	
Lower Flammability Limit	No information available	
Vapor Pressure	No information available	
Vapor Density	No information available	
Specific Gravity	1.009	
Water Solubility	Negligible	
Solubility in Other Solvents	No information available	
Partition Coefficient	No information available	
Autoignition Temperature	No information available	
Decomposition Temperature	No information available	
Kinematic Viscosity	No information available	
Dynamic Viscosity	No information available	
Explosive Properties	Not an explosive	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk Density	8.4 pounds/gallon

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

Keep out of reach of children. Avoid moisture. Incompatible Materials.

Incompatible Materials

Acids; Bases; Strong oxidizing agents; Water.

Hazardous Decomposition Products

Carbon oxides; Nitrogen oxides (NOx). Ammonia.

11. Toxicological Information

Information on Likely Routes of Exposure

Product Information	Independent laboratory test results confirm that exposure to chemical hazards are well below the OSHA permissible exposure limits when this product is used as recommended.
Inhalation	Remove to fresh air.
Eye Contact	Avoid contact with eyes. May cause serious eye damage.
Skin Contact	Harmful in contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause burns.
Ingestion	Not an expected route of exposure. Do NOT taste or swallow. Harmful if swallowed.
Component Information	Caution - This preparation contains a substance not yet fully tested

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50
Proprietary amine	= 1030 mg/kg (Rat)	-	-
Phenol, 4-nonyl-, branched 84852-15-3	= 580 mg/kg (Rat)	= 2031 mg/kg (Rabbit)	-
benzyl alcohol 100-51-6	= 1230 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h
m-Xylylenediamine 1477-55-0	= 660 mg/kg (Rat)	= 2 g/kg (Rabbit)	= 700 ppm (Rat) 1 h
Nonylphenol 25154-52-3	= 580 mg/kg (Rat)	= 2031 mg/kg (Rabbit)	-

Information on toxicological effects

No information available.

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

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Risk of serious damage to eyes. Irritating to eyes.
Irritation	Irritating to eyes, respiratory system and skin.
Corrosivity	This mixture has been tested and found to be not corrosive to skin. However, individuals with pre-existing conditions and/or sensitive skin may be effected.
Sensitization	May cause sensitization by skin contact.
Germ Cell Mutagenicity	No information available.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive Toxicity	Category 2: Substances which should be regarded as if they impair fertility in humans. May cause harm to the unborn child.
STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Aspiration Hazard	No information available.

Numerical Measures of Toxicity - Product Information

Unknown Acute Toxicity	10.95% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document	
ATEmix (oral)	650 mg/kg
ATEmix (dermal)	1165 mg/kg
ATEmix (inhalation-dust/mist)	2.6 mg/l
ATEmix (inhalation-vapor)	54.2 mg/l

12. Ecological Information**Ecotoxicity**

No information available

33.7% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Proprietary amine	37: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	110: 96 h <i>Leuciscus idus</i> mg/L LC50 semi-static		14.6 - 21.5: 48 h <i>Daphnia magna</i> mg/L EC50 semi-static 42: 24 h <i>Daphnia magna</i> mg/L EC50
Phenol, 4-nonyl-, branched 84852-15-3	0.36 - 0.48: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 0.16 - 0.72: 72 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 1.3: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	0.135: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through 0.1351: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through		0.14: 48 h <i>Daphnia magna</i> mg/L EC50
benzyl alcohol 100-51-6	35: 3 h <i>Anabaena variabilis</i> mg/L EC50	460: 96 h <i>Pimephales promelas</i> mg/L LC50 static 10: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static		23: 48 h water flea mg/L EC50
Nonylphenol 25154-52-3	0.41: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 1.3: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	0.135: 96 h <i>Pimephales promelas</i> mg/L LC50 flow-through		0.14: 48 h <i>Daphnia magna</i> mg/L EC50 0.17 - 0.21: 48 h <i>Daphnia magna</i> mg/L EC50 Static 0.0874 - 0.124: 48 h <i>Daphnia magna</i> mg/L EC50 semi-static

Persistence and Degradability

No information available

Chemical Name	Partition Coefficient
Proprietary amine	0.79
benzyl alcohol 100-51-6	1.1
Nonylphenol 25154-52-3	3.28

Other Adverse Effects

No information available

Ozone Depletion Potential (ODP) No information available

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.

14. Transport Information

DOT

UNID no	UN3066
Proper Shipping Name	Paint, 8,III., LTD QTY
Hazard Class	8
Packing group	III

ICAO (air)

IATA

IMDG

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.

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 %
Phenol, 4-nonyl-, branched - 84852-15-3	84852-15-3	15.0 - 25.0	1.0
Nonylphenol - 25154-52-3	25154-52-3	3.0 - 8.0	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
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)

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

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary amine	X		
benzyl alcohol 100-51-6		X	X
m-Xylylenediamine 1477-55-0	X	X	X
Nonylphenol		X	X

25154-52-3			
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U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

HMIS	Health Hazards 3	Flammability 1	Physical Hazards 0	Personal Protection X
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Prepared by	Key Polymer Corp Compliance
Issue Date	02-Jun-2015
Revision Date	02-Jun-2015

Revision note

No information available

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