SAFETY DATA SHEET

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

Product identifier
Product Name KEY QP300B

Other means of identification
Product Code(s) QP300B
UN/ID no. UN1760
Product Technology Epoxy B side
Document Key Quick Patch Part B
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 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) CCN 12410
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
Skin corrosion/irritation	Category 1 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
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child

Appearance Paste White **Physical state** Paste/Gel **Odor** Amine

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
Do not eat, drink or smoke when using this product
Do not breathe dust, fumes, or vapors
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
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
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
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

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

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local/regional/international regulations

Hazards Not Otherwise Classified (HNOC)

Not applicable
Other Information

Very toxic to aquatic life with long lasting effects, Very toxic to aquatic life

3. Composition/Information on Ingredients

Substance

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

Chemical Family Epoxy B Side, Curing Agent

Chemical name	CAS No.	Weight-%	Trade secret
Aliphatic Polyamine	Proprietary	30 - 40	*
Phenol, 4-nonyl-, branched	84852-15-3	20 - 25	*
Titanium dioxide	13463-67-7	20 - 25	*
Diethylenetriamine	111-40-0	1 - 2	*
Aluminium hydroxide	21645-51-2	1 - 5	*

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

4. First Aid Measures

Description of 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. Burning sensation. Itching. Rashes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. 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 (NOx).

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 Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Attention!. Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

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. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Transfer and handle product only in closed systems. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from other materials. Keep out of the reach of children.

Incompatible materials Acids; Bases; Strong oxidizing agents; Water. Reactive metals (e.g. sodium, calcium, zinc, etc.).

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
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³ TWA: 2.4 mg/m³ CIB 63 fine TWA: 0.3 mg/m³ CIB 63 ultrafine, including engineered nanoscale
Diethylenetriamine 111-40-0	TWA: 1 ppm S*	(vacated) TWA: 1 ppm (vacated) TWA: 4 mg/m³	TWA: 1 ppm TWA: 4 mg/m³
Aluminium hydroxide 21645-51-2	TWA: 1 mg/m³ respirable particulate matter	-	-

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron.

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 Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands thoroughly after handling.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Paste/Gel		
Appearance	Paste	**Odor**	Amine
Color	White	**Odor threshold**	N/A

Property	Values	Remarks • Method
pH	N/A	
Melting point / freezing point	N/A	
Boiling point / boiling range	> 150 °C	
Flash point	156 °C	Setaflash Closed Tester
Evaporation rate	Slower than n-butyl acetate	
Flammability (solid, gas)	N/A	
Flammability Limit in Air		
Upper flammability limit:	N/A	
Lower flammability limit:	N/A	
Vapor pressure	N/A	
Vapor density	Heavier than air	
Relative density	1.225	
Water solubility	Negligible	
Solubility in other solvents	N/A	
Partition coefficient	N/A	

Autoignition temperature	N/A
Decomposition temperature	N/A
Kinematic viscosity	N/A
Dynamic viscosity	18,000 cps @ 25° C
Explosive properties	Not an explosive
Oxidizing properties	N/A

Other Information

Softening point	N/A
Molecular weight	N/A
VOC Content (%)	N/A
Liquid Density	10.2 pounds/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
Avoid moisture. Incompatible materials.

Incompatible materials
Acids; Bases; Strong oxidizing agents; Water. Reactive metals (e.g. sodium, calcium, zinc, etc.).

Hazardous decomposition products
Carbon oxides; Nitrogen oxides (NOx). Nitric acid. Ammonia. Sulfur oxides. Hydrogen sulfide. Formaldehyde. May emit toxic fumes under fire conditions.

11. Toxicological Information

Information on likely routes of exposure

Product Information The product has not been tested.

Inhalation Remove to fresh air. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye contact Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.

Skin contact Corrosive. Causes burns. Harmful in contact with skin. May be absorbed through the skin in harmful amounts. Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion Not an expected route of exposure. Harmful if swallowed. Can burn mouth, throat, and stomach. Do NOT taste or swallow.

Component Information Caution - This preparation contains a substance not yet fully tested

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Aliphatic Polyamine	= 2140 µL/kg (Rat)	= 866 mg/kg (Rabbit)	-

Phenol, 4-nonyl-, branched 84852-15-3	= 1300 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	-
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	= 5.09 mg/L (Rat) 4 h
Diethylenetriamine 111-40-0	= 1080 mg/kg (Rat)	= 672 mg/kg (Rabbit)	= 70 mg/L (Rat) 4 h
Aluminium hydroxide 21645-51-2	> 5000 mg/kg (Rat)	-	-

Information on toxicological effects

N/A.

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

Skin corrosion/irritation Repeated or prolonged contact may cause skin irritation and dermatitis. Causes burns.
Serious eye damage/eye irritation Risk of serious damage to eyes.
Irritation Causes severe irritation and or burns.
Corrosivity Risk of serious damage to eyes. Causes burns.
Sensitization May cause sensitization by skin contact. Repeated or prolonged contact may cause allergic reactions in very susceptible persons.
Germ cell mutagenicity N/A.
Carcinogenicity Titanium Dioxide (CAS 13463-67-7) is a naturally occurring substance that poses very low respirable carcinogen risk when encapsulated in a polymeric liquid. If sanding or grinding finished product, wear appropriate personal protective equipment for respirable dust hazards.

Chemical name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7		Group 2B		X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Category 2: Substances which should be regarded as if they impair fertility in humans.
STOT - single exposure May cause disorder and damage to the; Skin, Lungs, Eyes, Central nervous system.
STOT - repeated exposure May cause disorder and damage to the; Kidney, Skin.
Target organ effects Skin, Eyes, Blood, Liver, Lungs, Central nervous system.
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) 928.40 mg/kg
ATEmix (dermal) 1,358.00 mg/kg
ATEmix (inhalation-dust/mist) 98.80 mg/l

12. Ecological Information

4-Nonylphenol, branched.

Ecotoxicity

Very toxic to aquatic life with long lasting effects

Chemical name	Algae/aquatic plants	Fish	Crustacea
Aliphatic Polyamine	495: 72 h Pseudokirchneriella subcapitata mg/L EC50	1950 - 2460: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Poecilia reticulata mg/L LC50 semi-static 100: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	32: 48 h Daphnia magna mg/L EC50

Phenol, 4-nonyl-, branched 84852-15-3	0.16 - 0.72: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 0.36 - 0.48: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 1.3: 72 h Desmodesmus subspicatus mg/L EC50	0.135: 96 h Pimephales promelas mg/L LC50 flow-through 0.1351: 96 h Lepomis macrochirus mg/L LC50 flow-through	0.14: 48 h Daphnia magna mg/L EC50
Diethylenetriamine 111-40-0	1164: 72 h Pseudokirchneriella subcapitata mg/L EC50 345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodesmus subspicatus mg/L EC50	1014: 96 h Poecilia reticulata mg/L LC50 semi-static 248: 96 h Poecilia reticulata mg/L LC50 static	16: 48 h Daphnia magna mg/L EC50

Persistence and degradability

N/A

Chemical name	Partition coefficient
Aliphatic Polyamine	-1.48
Diethylenetriamine 111-40-0	-1.3

Other adverse effects

N/A

Ozone depletion potential (ODP) 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.

US EPA Waste Number D002, U122 D001, U019

Chemical name	California Hazardous Waste Status
Diethylenetriamine 111-40-0	Toxic

14. Transport Information

DOT

UN/ID no. UN1760
Proper shipping name CORROSIVE LIQUIDS, N.O.S.
Hazard Class 8
Packing Group III
Special Provisions IB3, T7, TP1, TP28
Marine pollutant 4-Nonylphenol, branched.
Description UN1760 CORROSIVE LIQUIDS, N.O.S., (Aliphatic Polyamine, 4-Nonylphenol, branched),8, III
Emergency Response Guide Number 154

ICAO (air)

UN/ID no. UN1760
Proper shipping name Corrosive liquid, n.o.s.
Hazard Class 8

Packing Group	III
Special Provisions	A3
Description	UN1760, Corrosive liquid, n.o.s. (Aliphatic Polyamine, 4-Nonylphenol, branched),8, III

IATA

UN/ID no.	UN1760
Proper shipping name	Corrosive liquid, n.o.s.
Hazard Class	8
Packing Group	III
ERG Code	8L
Special Provisions	A3, A803
Description	UN1760 Corrosive liquid, n.o.s. (Aliphatic Polyamine, 4-Nonylphenol, branched), 8, III

IMDG

UN/ID no.	UN1760
Proper shipping name	CORROSIVE LIQUID, N.O.S.
Hazard Class	8
Packing Group	III
EmS-No.	F-A, S-B
Special Provisions	223, 274
Marine pollutant	4-Nonylphenol, branched
Description	UN1760 CORROSIVE LIQUID, N.O.S. (Aliphatic Polyamine, 4-Nonylphenol, branched), 8, III, Marine pollutant

15. Regulatory Information

International Inventories

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	20 - 25	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)

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

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
Titanium dioxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Aliphatic Polyamine	X	X	X
Titanium dioxide 13463-67-7	X	X	X
Diethylenetriamine 111-40-0	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other Information

Chronic Hazard Star Legend ** = Chronic Health Hazard*

Prepared By Key Polymer Corp Compliance
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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