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Version 3

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

Product Identifier

Product name KEY FP100B

Other Means of Identification

Product Code FP100B

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 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitization | Category 1 |

EMERGENCY OVERVIEW

WARNING

Hazard Statements

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

**Appearance** Viscous Light Brown**Physical State** Paste**Odor** Amine**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Wear protective gloves, protective clothing, eye protection, face protection
 Avoid breathing dust, fumes, or vapors
 Contaminated work clothing should not be allowed out of the workplace

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
 Call a POISON CENTER or doctor/physician if you feel unwell
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

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)**Other Information**

May be harmful if swallowed
 93.050701% 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, Curing Agent

| Chemical Name | CAS No | Weight-% | Trade secret |
|---------------------------------|------------|-----------|--------------|
| Calcium carbonate | 1317-65-3 | 20 - 30 | * |
| Cellulose microcrystalline | 9004-34-6 | 1 - 5 | * |
| Tris(dimethylaminomethyl)phenol | 90-72-2 | 1 - 5 | * |
| Silicon dioxide | 14808-60-7 | 0.1 - 0.5 | * |

Calcium carbonate, when encapsulated in a polymer, is not expected to pose a respirable health hazard when processed under normal conditions of use.

* 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).

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 Store and handle away from heat, flames and oxidizing materials. Keep containers tightly closed in a cool, well-ventilated place.

Incompatible Materials Acids; Bases; Strong oxidizing agents; Water. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

8. Exposure Controls/Personal Protection

Control Parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|--|---|--|
| Calcium carbonate 1317-65-3 | - | TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction | TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust |
| Cellulose microcrystalline 9004-34-6 | TWA: 10 mg/m ³ | TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ (vacated) STEL: 10 mg/m ³ | TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust TWA: 1 mg/m ³ |
| Silicon dioxide 14808-60-7 | TWA: 0.025 mg/m ³ respirable fraction | (vacated) TWA: 0.1 mg/m ³ respirable dust : (30)/(%SiO ₂ + 2) mg/m ³ TWA total dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |

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 protective gloves and protective clothing. |
| 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 | Paste | Odor | Amine |
| Appearance | Viscous | Odor Threshold | No information available |
| Color | Light Brown | | |
| Property | Values | Remarks • Method | |
| pH | No information available | | |
| Melting Point/Freezing Point | No information available | | |
| Boiling Point/Boiling Range | > 150 °C | | |
| Flash Point | 155.5 °C | Setaflash Closed Tester | |
| Evaporation Rate | Slower than n-butyl acetate | | |
| 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 | Heavier than air | | |
| Specific Gravity | 1.2 | | |
| 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 | 71667 cSt | | |
| Dynamic Viscosity | 86000 cps @ 25° C | | |
| 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 | 10.0 pounds/gallon |
| Bulk Density | No information available |

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. Heat, flames and sparks.

Incompatible Materials

Acids; Bases; Strong oxidizing agents; Water. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Hazardous Decomposition Products

Carbon oxides; Nitrogen oxides (NOx). Aldehydes. Calcium oxides. Nitric acid. Nitrosamines if product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Ammonia. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. Toxicological Information

Information on Likely Routes of Exposure

| | |
|------------------------------|--|
| Product Information | The product has not been tested. |
| Inhalation | Remove to fresh air. |
| Eye Contact | Avoid contact with eyes. Severely irritating to eyes. |
| Skin Contact | Avoid contact with skin. Irritating to skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. |
| Ingestion | Do NOT taste or swallow. Not an expected route of exposure. May be 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 |
|--|----------------------|----------------------|--------------------------------------|
| Cellulose microcrystalline 9004-34-6 | > 5 g/kg (Rat) | > 2 g/kg (Rabbit) | > 5800 mg/m ³ (Rat) 4 h |
| Tris(dimethylaminomethyl)phenol 90-72-2 | = 1000 mg/kg (Rat) | = 1280 mg/kg (Rat) | - |
| Silicon dioxide 14808-60-7 | = 500 mg/kg (Rat) | - | - |

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. Repeated or prolonged contact may cause skin irritation and dermatitis. |
| Serious eye damage/eye irritation | Irritating to eyes. |
| Irritation | Irritating to eyes and skin. |
| Sensitization | May cause sensitization by skin contact. |
| Germ Cell Mutagenicity | No information available. |
| Carcinogenicity | Silicon Dioxide (CAS 14808-60-7) is a naturally occurring substance that poses 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. Cellulose Microcrystalline (CAS 9004-34-6) is a naturally occurring substance that poses very low respirable carcinogen risk when encapsulated in a polymeric liquid. |

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---|-------|---------|-------|------|
| Cellulose microcrystalline 9004-34-6 | | Group 1 | Known | X |
| Silicon dioxide 14808-60-7 | A2 | Group 1 | Known | X |

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

| | |
|---------------------------------|---------------------------|
| Reproductive Toxicity | No information available. |
| STOT - Single Exposure | No information available. |
| STOT - Repeated Exposure | No information available. |

| | |
|--------------------------|--|
| Chronic Toxicity | Repeated contact may cause allergic reactions in very susceptible persons. |
| Aspiration Hazard | No information available. |

Numerical Measures of Toxicity - Product Information

| | |
|---|---|
| Unknown Acute Toxicity | 93.050701% 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) | 2255 mg/kg |
| ATEmix (dermal) | 1810 mg/kg |
| ATEmix (inhalation-dust/mist) | 9.7 mg/l |

12. Ecological Information

Ecotoxicity

No information available
 100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and Degradability

No information available

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

| | |
|-------------------|---------------|
| <u>DOT</u> | Not regulated |
|-------------------|---------------|

| | |
|--------------------------|---------------|
| <u>ICAO (air)</u> | Not regulated |
|--------------------------|---------------|

| | |
|--------------------|---------------|
| <u>IATA</u> | Not regulated |
|--------------------|---------------|

| | |
|--------------------|---------------|
| <u>IMDG</u> | 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. |
|-------------|---|

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - 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

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 |
|--|---------------------------|
| Cellulose microcrystalline - 9004-34-6 | Carcinogen |
| Silicon dioxide - 14808-60-7 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---|------------|---------------|--------------|
| Calcium carbonate 1317-65-3 | X | X | X |
| Cellulose microcrystalline 9004-34-6 | X | X | X |
| Silicon dioxide 14808-60-7 | X | X | X |

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

Prepared by Key Polymer Corp Compliance
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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