



17 Shepard Street • Lawrence, MA 01843 USA

+1.978.683.9411

www.keypolymer.com

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

Product identifier

Product Name KEY PC2022A

Other means of identification

Product Code(s) PC2022A

Product Technology Epoxy A side

Document Tough-Seal 22A

None

Epoxy A side. 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 - Inhalation (Dusts/Mists) | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitization | Category 1 |
| Germ cell mutagenicity | Category 2 |
| Reproductive toxicity | Category 1B |
| Specific target organ toxicity (single exposure) | Category 1 (thymus) |
| Specific target organ toxicity (repeated exposure) | Category 1 (thymus) |

Emergency Overview

DANGER

Hazard statements

Harmful if inhaled

Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 Suspected of causing genetic defects
 May damage fertility or the unborn child
 Causes damage to organs
 (thymus)
 Causes damage to organs through prolonged or repeated exposure
 (thymus)



Appearance Opaque White

Physical state Liquid

Odor None

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
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace
 Do not breathe dust, fumes, or vapors
 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

Precautionary Statements - Response

IF exposed: 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 eye irritation persists: Get medical advice/attention
 Take off contaminated clothing and wash before reuse
 IF ON SKIN: Wash with plenty of soap and water
 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
 Call a POISON CENTER or doctor/physician if you feel unwell

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents & container in accordance with local, state & federal regulations

Hazards Not Otherwise Classified (HNOC)

Other Information

Toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Substance

Chemical Family
Chemical nature

Epoxy A Side
 Epoxy resin mixture.

| Chemical name | CAS No. | Weight-% | Trade secret |
|------------------------------------|-------------|-----------|--------------|
| Bisphenol A diglycidyl ether resin | 25068-38-6 | 40 - 70 | * |
| Calcium carbonate | 1317-65-3 | 20 - 30 | * |
| Proprietary epoxy resin | Proprietary | 1 - 10 | * |
| Dibutyltin dilaurate | 77-58-7 | 0.999 | * |
| 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

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. If eye irritation persists: Get medical advice/attention. |
| Skin contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. |
| Inhalation | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| Ingestion | Not an expected route of exposure. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label. |
| Self-protection of the first aider | First Aider: Pay attention to self-protection. Use personal protective equipment as required. |

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

Use CO₂, dry chemical, or foam.

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

Specific hazards arising from the chemical

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

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 Ventilate affected area. Extremely slippery when spilled.

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

Incompatible materials Strong oxidizing agents, Strong acids, Strong bases.

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 |
|---------------------------------|---|--|---|
| 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 |
| Dibutyltin dilaurate 77-58-7 | STEL: 0.2 mg/m ³ Sn TWA: 0.1 mg/m ³ Sn S* | TWA: 0.1 mg/m ³ Sn (vacated) TWA: 0.1 mg/m ³ Sn (vacated) S* | IDLH: 25 mg/m ³ Sn TWA: 0.1 mg/m ³ except Cyhexatin Sn |
| Silicon dioxide 14808-60-7 | TWA: 0.025 mg/m ³ respirable particulate matter | TWA: 50 µg/m ³ TWA: 50 µg/m ³ excludes construction work, agricultural operations, and exposures that | IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust |

| | | | |
|--|--|---|--|
| | | result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m ³ respirable dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction | |
|--|--|---|--|

Appropriate engineering controls

Engineering controls

Showers
 Eyewash stations
 Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Splash Goggles.

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 | Liquid | Odor | None |
| Appearance | Opaque | Odor threshold | N/A |
| Color | White | | |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------|------------------|-------------------------|
| pH | N/A | |
| Melting point / freezing point | N/A | |
| Boiling point / boiling range | > 200 °C | |
| Flash point | > 203 °C | Setaflash Closed Tester |
| 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 | N/A | |
| Vapor density | N/A | |
| Relative density | 1.333 | |
| 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 | N/A | |
| 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 11.04 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

Hazardous polymerization does not occur.

Hazardous polymerization None under normal processing.

Conditions to avoid

Keep out of reach of children. Extremes of temperature and direct sunlight. Mixture with or exposure to incompatible materials.

Incompatible materials

Strong oxidizing agents, Strong acids, Strong bases.

Hazardous decomposition products

Carbon monoxide, Carbon Dioxide (CO₂), Aldehydes, Aromatic hydrocarbons, 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. Harmful by inhalation.

Eye contact Vapor may cause irritation. Avoid contact with eyes. Severely irritating to eyes.

Skin contact Avoid contact with skin. Irritating to skin. May cause sensitization by skin contact.

Ingestion Not an expected route of exposure. Harmful if swallowed.

| Chemical name | ATEmix (oral) | ATEmix (dermal) | Inhalation LC50 |
|--|-----------------------|-------------------------|-----------------|
| Bisphenol A diglycidyl ether resin 25068-38-6 | = 11400 mg/kg (Rat) | - | - |
| Proprietary epoxy resin | = 17100 mg/kg (Rat) | > 3987 mg/kg (Rabbit) | - |
| Dibutyltin dilaurate 77-58-7 | = 45 mg/kg (Rat) | > 2000 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 Irritating to skin.
Serious eye damage/eye irritation Irritating to eyes.
Irritation Irritating to eyes and skin.
Sensitization May cause sensitization by skin contact.
Germ cell mutagenicity May cause genetic defects.
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.

| Chemical name | ACGIH | IARC | NTP | OSHA |
|-------------------------------|-------|---------|-------|------|
| 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

May cause harm to the unborn child. May impair fertility.

STOT - single exposure

May cause disorder and damage to the. thymus.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure. thymus.

Chronic Toxicity

Repeated skin contact may lead to irritation and to sensitization, possible with cross-sensitization to other epoxies.

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)

12,204.00 mg/kg mg/l

12. Ecological Information

Ecotoxicity

Toxic to aquatic life with long lasting effects

0.318 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

N/A

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 | California Hazardous Waste Status |
|---------------------------------|-----------------------------------|
| Dibutyltin dilaurate 77-58-7 | Toxic |

14. Transport Information

Note:

A197 - Not restricted provided that the net quantity in any receptacle does not exceed 5 Kg or 5 L and the packaging meets defined standards.

DOT

Not regulated

ICAO (air)

UN/ID no.

UN3082

| | |
|-----------------------------|--|
| Proper shipping name | Environmentally Hazardous Substance N.O.S. (Bisphenol A epoxy resin) |
| Hazard Class | 9 |
| Packing Group | III |

IATA

| | |
|-----------------------------|---|
| UN/ID no. | UN3082 |
| Proper shipping name | Environmentally Hazardous substance Liquid N.O.S. (Bisphenol A epoxy resin) |
| Hazard Class | 9 |
| Packing Group | III |

IMDG

| | |
|-----------------------------|--|
| UN/ID no. | UN3082 |
| Proper shipping name | Environmentally Hazardous Substance Liquid N.O.S. (Bisphenol A epoxy resin) |
| Hazard Class | 9 |
| Packing Group | III |
| Special Provisions | IMDG code 2.9.3 |
| Marine pollutant | This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO |

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.

IECSC

All components are listed or exempted.

Legend:

TSCA - *United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDL - *Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS - *European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

IECSC - *China Inventory of Existing Chemical Substances*

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 |
|------------------------------|---------------------------|
| 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 |
| Silicon dioxide 14808-60-7 | 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 |
| Issuing Date | 25-Nov-2014 |
| Revision Date | 26-Sep-2022 |

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