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[www.keypolymer.com](http://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 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 - 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
Specific target organ toxicity (repeated exposure)	Category 1

## 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  
 Wash face, hands and any exposed skin thoroughly after handling  
 Contaminated work clothing should not be allowed out of the workplace  
 Do not breathe dust, fumes, or vapors  
 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  
 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  
 Call a POISON CENTER or doctor/physician if you feel unwell

#### 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)

#### Other Information

May be harmful if swallowed, May be harmful in contact with skin, Toxic to aquatic life with long lasting effects  
 97.63336% of the mixture consists of ingredient(s) of unknown toxicity

### 3. Composition/Information on Ingredients

#### Substance

**Chemical Family**

Epoxy A Side

**Chemical nature** 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	1	*
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

<b>General advice</b>	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).
<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Ingestion</b>	Not an expected route of exposure. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
<b>Self-protection of the first aider</b>	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 CO<sub>2</sub>, 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** 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** 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 <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Dibutyltin dilaurate 77-58-7	STEL: 0.2 mg/m <sup>3</sup> Sn TWA: 0.1 mg/m <sup>3</sup> Sn S*	TWA: 0.1 mg/m <sup>3</sup> Sn (vacated) TWA: 0.1 mg/m <sup>3</sup> Sn (vacated) S*	IDLH: 25 mg/m <sup>3</sup> Sn TWA: 0.1 mg/m <sup>3</sup> except Cyhexatin Sn
Silicon dioxide 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter	TWA: 50 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> excludes construction work, agricultural operations, and	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust

		exposures that result from the processing of sorptive clays (vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust : (250)/( %SiO <sub>2</sub> + 5) mppcf TWA respirable fraction : (10)/( %SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction	
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**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**

<b>Physical state</b>	Liquid	<b>Odor</b>	None
<b>Appearance</b>	Opaque	<b>Odor threshold</b>	N/A
<b>Color</b>	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**

<b>Softening point</b>	N/A
<b>Molecular weight</b>	N/A
<b>VOC Content (%)</b>	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 (CO<sub>2</sub>), 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	= 175 mg/kg ( Rat ) = 45 mg/kg ( Rat )	= 630 mg/kg ( Rabbit )	-
Silicon dioxide 14808-60-7	= 500 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
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Silicon dioxide 14808-60-7	A2	Group 1	Known	X
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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**

**Unknown acute toxicity** 97.63336% 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)** 2,623.00 mg/kg  
**ATEmix (dermal)** 2,898.00 mg/kg mg/l  
**ATEmix (inhalation-dust/mist)** 0.17 mg/l

**12. Ecological Information**

**Ecotoxicity**

Toxic to aquatic life with long lasting effects  
 33.035 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Crustacea
Dibutyltin dilaurate 77-58-7		2: 48 h Oryzias latipes mg/L LC50	

**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)**

<b>UN/ID no.</b>	UN3082
<b>Proper shipping name</b>	Environmentally Hazardous Substance N.O.S. (Bisphenol A epoxy resin)
<b>Hazard Class</b>	9
<b>Packing Group</b>	III

**IATA**

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

**IMDG**

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

<b>15. Regulatory Information</b>
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**International Inventories**

<b>TSCA</b>	All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act.
<b>IECSC</b>	All components are listed or exempted.

**Legend:**

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

*DSL/NDSL - 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**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	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
Glycidyl phenyl ether - 122-60-1	Carcinogen Male Reproductive

**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**

<b>NFPA</b>	Health hazards N/A	Flammability N/A	Instability N/A	Physical and chemical properties -
<b>HMIS</b>	Health hazards 2*	Flammability 1	Physical hazards 0	Personal Protection X
<i>Chronic Hazard Star Legend</i>	<i>* = Chronic Health Hazard</i>			

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**