

SAFETY DATA SHEET



Date Prepared : 10/24/2017

MSDS No : 261

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: Silk KG Part A, Epoxy**PRODUCT FORMULATION NAME:** Silk KG Part A, Epoxy**MANUFACTURER**

Bonstone Materials Corporation

707 Swan Drive

Mukwonago, WI 53149

Emergency Contact: Mike Beckmann**Emergency Phone:** 262-363-9877**E-Mail:** info@bonstone.com

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS**Health:**

Skin Irritation, Category 2

Skin Sensitization, Category 1

GHS LABEL

Environment

Exclamation
mark**SIGNAL WORD:** WARNING**HAZARD STATEMENTS**

H315: Causes skin irritation.

H312: Harmful in contact with skin.

H412: Harmful to aquatic life with long lasting effects.

H317: May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS**General:**

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

Prevention:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P273: Avoid release to the environment.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P264: Wash hands thoroughly after handling.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P391: Collect spillage.
 P302+P352: IF ON SKIN: Wash with plenty of water/...
 P337+P313: If eye irritation persists: Get medical advice/attention.
 P332+P313: If skin irritation occurs: Get medical advice/attention.
 P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
 P370+P378: In case of fire: Use CO₂, powder, or water spray for extinction.
 P321: Specific treatment (see ... on this label).
 P362: Take off contaminated clothing.
 P363: Wash contaminated clothing before reuse.

Storage:

P403+P235: Store in a well-ventilated place. Keep cool.

Disposal:

P501: Dispose of contents/container in accordance with all local/regional/national/international regulations.

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Inhalation and skin contact are expected to be the primary routes of occupational exposure to benzyl alcohol. Vapors may cause respiratory tract irritation and a burning sensation. High vapor concentrations, ingestion and skin absorption may cause headache, sore throat, coughing, difficulty breathing, low blood pressure, fatigue, nausea, vomiting, diarrhea and abdominal pain. Severe cases may result in respiratory and muscular paralysis, convulsions, narcosis and death. Direct contact with liquid may cause eye and skin irritation, allergic skin reaction and anesthetic (numbing) effects.

Mild to severe lung injury can occur if benzyl alcohol is drawn into lungs after swallowing or vomiting after swallowing.

POTENTIAL HEALTH EFFECTS

EYES: Moderately irritating to the eyes.

SKIN: Causes skin irritation. Allergic reactions are possible.

INGESTION: This material may be harmful or fatal if swallowed.

INHALATION: Prolonged inhalation may be harmful.

SENSITIZATION: May cause skin sensitization, an allergic reaction which becomes evident on exposure to this material.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Bisphenol A/epichlorohydrin Resin	Trade secret	25068-38-6
Benzyl Alcohol	Trade secret	100-51-6
Silica, Amorphous, Fumed	Trade secret	112945-52-5
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	Trade secret	17557-23-2

4. FIRST AID MEASURES

EYES: Flush eye with water for 15 minutes. Get medical attention.

SKIN: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Causes eye irritation.

INHALATION: Prolonged or excessive inhalation may cause respiratory tract irritation.

5. FIRE FIGHTING MEASURES

GENERAL HAZARD: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

FIRE FIGHTING PROCEDURES: Use alcohol foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material. Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

FIRE FIGHTING EQUIPMENT: Firefighters and others who may be exposed to products of combustion should wear full firefighting turnout gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Pick up liquid with additional absorbent and place in a disposable container.

GENERAL PROCEDURES: Absorb the liquid and scrub the area with detergent and water.

RELEASE NOTES: Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

SPECIAL PROTECTIVE EQUIPMENT: Remove contaminated clothing and wash before reuse.

COMMENTS: If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Clean-up personnel must be equipped with self-contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid contact with eyes, skin, and clothing.

HANDLING: Wash hands before eating and wash before reuse.

STORAGE: Store in a tightly closed container.

COMMENTS: Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
EXPOSURE LIMITS				
Chemical Name	Type		ppm	mg/m ³
Benzyl Alcohol	Supplier OEL	TWA	10 ppm ^[1]	[1]
Silica, Amorphous, Fumed	ACGIH TLV	TWA	[2]	10 mg/m ³ ^[2]
Footnotes:				
1. WEEL (US Workplace Environmental Exposure Levels)				
2. (Total dust, containing less than 1% quartz)				

ENGINEERING CONTROLS: Use only in a well ventilated area.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: Wash thoroughly after handling.

RESPIRATORY: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

WORK HYGIENIC PRACTICES: Provide readily accessible eyewash stations and safety showers. Wash at the end of each work shift and before eating, smoking, or using the toilet.

OTHER USE PRECAUTIONS: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

COMMENTS: Avoid breathing any (dust, vapor, mist, gas) that may be generated when grinding cured material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Boiling Point (°C)	Freezing Point (°C)	Solubility in Water	Specific Gravity
Bisphenol A/epichlorohydrin Resin	480			Negligible	1.17
Benzyl Alcohol	220			Slightly soluble (less than 5%)	1.04
Silica, Amorphous, Fumed		2230	1600	Negligible	2.2

FLAMMABLE LIMITS: 0 to 0

VAPOR PRESSURE: 23.75

VAPOR DENSITY: 23.75

BOILING POINT: (450°F) to (500°F)

SPECIFIC GRAVITY: 1.188

(VOC): = 0 (no VOC's)

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: Stable.

CONDITIONS TO AVOID: Can react vigorously with strong oxidizing agents, strong Lewis or mineral acids, and strong mineral and organic bases---especially primary and secondary aliphatic amines. Reaction with some curing agents may produce considerable heat. Runaway cure actions may char and decompose the resin system, generating unidentified fumes and vapors which may be toxic.

HAZARDOUS DECOMPOSITION PRODUCTS: The byproducts expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Bisphenol A/epichlorohydrin Resin	11.4 g/kg (rat)	> 20 ml/kg (rabbit)	
Benzyl Alcohol	1230 to 3100 (rat)	2000 mg/kg (rabbit)	1000 ppm (rat)
Silica, Amorphous, Fumed	3160 mg/kg (rat)		
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	8870 mg/kg (rat)	2150 mg/kg (rabbit)	

CARCINOGENICITY

Chemical Name	IARC Status
Silica, Amorphous, Fumed	Group 3

NOTES: A two-year dermal study in mice produced skin tumors at greater than 1.87 mg neopentylglycoldiglycidylether per mouse per week. (Holland, 1981).

GENERAL COMMENTS: Slight to very low toxicity.

COMMENTS: Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects. Results of immunogenicity tests in animals have been negative. Has been shown to be negative in some in- vitro immunogenicity tests and positive in others.

12. ECOLOGICAL INFORMATION

COMMENTS: No information.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements be be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

OTHER SHIPPING INFORMATION: Not regulated by DOT

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

313 REPORTABLE INGREDIENTS: Not considered a SARA 313 "Toxic Chemical".

TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
Bisphenol A/epichlorohydrin Resin	25068-38-6
Benzyl Alcohol	100-51-6

TSCA STATUS: All ingredients in this mixture are in compliance with TSCA.

STATES WITH SPECIAL REQUIREMENTS

Chemical Name	Requirements
Benzyl Alcohol	This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List: Benzyl Alcohol This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List: Benzyl Alcohol
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	NJ: New Jersey Right-to-Know: The following is required compositional information: Chemical Name: OXIRANE, 2-2'-[2,2-DIMETHYL-1,3-PROPANEDIYL)BIS(OXYMETHYLENE)]BIS- CAS Number: 17557-23-2 PA: Pennsylvania Right-to-Know: The following is required compositional information: Chemical Name: OXIRANE, 2-2'-[2,2-DIMETHYL-1,3-PROPANEDIYL)BIS(OXYMETHYLENE)]BIS- CAS Number: 17557-23-2 Comment: Not on Pennsylvania Hazardous Substance List

CALIFORNIA PROPOSITION 65

Chemical Name	Wt. %	Listed
1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane	Trade secret	Cancer

CANADA

WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This product and/or all of its components is/are listed on the TSCA Inventory.

16. OTHER INFORMATION

APPROVED BY: Mike Beckmann **TITLE:** President

Date Prepared: 10/24/2017

INFORMATION CONTACT: Mike Beckmann

MANUFACTURER DISCLAIMER: The information provided in this 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 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 any process, unless specified in the text.

SAFETY DATA SHEET



Date Prepared : 10/23/2017

MSDS No : 260

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: Silk KG, Part B, Curing Agent**PRODUCT FORMULATION NAME:** Silk KG, Part B, Curing Agent**MANUFACTURER**

Bonstone Materials Corporation

707 Swan Drive

Mukwonago, WI 53149

Emergency Contact: Mike Beckmann**Emergency Phone:** 262-363-9877**E-Mail:** info@bonstone.com

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS**Health:**

Acute Toxicity (Oral), Category 4

Acute Toxicity (Dermal), Category 4

Serious Eye Damage, Category 1

Skin Corrosion, Category 1

Skin Sensitization, Category 1

Reproductive Toxicity, Category 2

Environmental:

Acute Hazards to the Aquatic Environment, Category 1

GHS LABEL

Environment

Health
hazard

Corrosion

SIGNAL WORD: DANGER**HAZARD STATEMENTS**

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H312: Harmful in contact with skin.

H317: May cause an allergic skin reaction.

H361: Suspected of damaging fertility or the unborn child (state specific effect if known)(state route of exposure

if it is conclusively proven that no other routes of exposure cause the hazard).
 H400: Very toxic to aquatic life.

PRECAUTIONARY STATEMENTS

Prevention:

- P273: Avoid release to the environment.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P270: Do not eat, drink or smoke when using this product.
- P285: In case of inadequate ventilation wear respiratory protection.
- P271: Use only outdoors or in a well-ventilated area.
- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P301+P312: IF SWALLOWED: Call a POISON CENTER/ doctor/...if you feel unwell.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P310: Immediately call a POISON CENTER/doctor/...
- P362+P364: Take off contaminated clothing and wash it before reuse.

Storage:

- P405: Store locked up.

Disposal:

- P501: Dispose of contents/container in accordance with all local/regional/national/international regulations.

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: Inhalation and skin contact are expected to be the primary routes of occupational exposure to benzyl alcohol. Vapors may cause respiratory tract irritation and a burning sensation. High vapor concentrations, ingestion and skin absorption may cause headache, sore throat, coughing, difficulty breathing, low blood pressure, fatigue, nausea, vomiting, diarrhea and abdominal pain. Severe cases may result in respiratory and muscular paralysis, convulsions, narcosis and death. Direct contact with liquid may cause eye and skin irritation, allergic skin reaction and anesthetic (numbing) effects.
 Mild to severe lung injury can occur if benzyl alcohol is drawn into lungs after swallowing or vomiting after swallowing.

POTENTIAL HEALTH EFFECTS

- SKIN:** May cause skin irritation.
- INHALATION:** Prolonged inhalation may be harmful.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
1,3 cyclohexanedimethaneamine	Trade secret	2579-20-6
Benzyl Alcohol	Trade secret	100-51-6
Nonylphenol	Trade secret	25154-52-3
Polydimethylsiloxane, Silica Adduct	Trade secret	67762-90-7

4. FIRST AID MEASURES

EYES: Immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. GET

MEDICAL ATTENTION. Contaminated clothing should be discarded in a manner which limits further exposure.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water to drink. Never give anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Causes eye irritation.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use alcohol foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

FIRE FIGHTING EQUIPMENT: When burned, the following hazardous products of combustion can occur: irritating and/or toxic vapors. Avoid breathing fumes from fire-exposed material.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Pick up liquid with additional absorbent and place in a disposable container.

GENERAL PROCEDURES: Contain spill with dike to prevent entry into sewers.

7. HANDLING AND STORAGE

HANDLING: Wash hands before eating and wash before reuse.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)				
Chemical Name	Type		EXPOSURE LIMITS	
	Supplier OEL	TWA	ppm	mg/m³
Benzyl Alcohol	Supplier OEL	TWA	10 ppm ^[1]	^[1]
Polydimethylsiloxane, Silica Adduct	Supplier OEL	TWA		10 mg/m ³
Footnotes:				
1. WEEL (US Workplace Environmental Exposure Levels)				

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: Wash thoroughly after handling.

OTHER USE PRECAUTIONS: Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name	Flash Point (°C)	Melting Point (°C)	Boiling Point (°C)	Freezing Point (°C)	Auto Ignition (°C)	Solubility in Water	Specific Gravity
1,3 cyclohexanedimethaneamine	116	-25	240		316	Soluble	0.944
Benzyl Alcohol	220					Slightly soluble (less than 5%)	1.04
Polydimethylsiloxane, Silica Adduct	600		2230	1700			1.8

FLAMMABLE LIMITS: 0 to 0

VAPOR PRESSURE: 14.8

VAPOR DENSITY: 14.8

BOILING POINT: to (464°F)

SPECIFIC GRAVITY: 1.077

(VOC): = 0 (no VOC's)

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide and carbon Monoxide may form when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
1,3 cyclohexanedimethaneamine	700 to 780 mg/kg (rat)	1700 ml/kg (rabbit)	
Benzyl Alcohol	1230 to 3100 (rat)	2000 mg/kg (rabbit)	1000 ppm (rat)
Polydimethylsiloxane, Silica Adduct	> 5000 mg/kg (rat)		

GENERAL COMMENTS: Slight to very low toxicity.

12. ECOLOGICAL INFORMATION

COMMENTS: No information.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Recover, reclaim or recycle when practical. Dispose of in accordance with federal, state and local regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements be be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PRIMARY HAZARD CLASS/DIVISION: 8

UN/NA NUMBER: 2735**PACKING GROUP:** III**COMMENTS:** Amines, liquid, corrosive, N.O.S. (1,3 Cyclohexanedimethamine)**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****313 REPORTABLE INGREDIENTS:** Not considered a SARA 313 "Toxic Chemical".**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

Chemical Name	CAS
1,3 cyclohexanedimethaneamine	2579-20-6
Benzyl Alcohol	100-51-6
Polydimethylsiloxane, Silica Adduct	67762-90-7

TSCA STATUS: All ingredients in this mixture are in compliance with TSCA.**STATES WITH SPECIAL REQUIREMENTS**

Chemical Name	Requirements
Benzyl Alcohol	This product does contain the following chemical(s), as indicated below, currently on the Massachusetts Right to Know Substance List: Benzyl Alcohol This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List: Benzyl Alcohol

CANADA**WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):** This product and/or all of it's components is/are listed on the TSCA Inventory.**16. OTHER INFORMATION****APPROVED BY:** Mike Beckmann **TITLE:** President**Date Prepared:** 10/23/2017**INFORMATION CONTACT:** Mike Beckmann**MANUFACTURER DISCLAIMER:** The information provided in this 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 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 any process, unless specified in the text.