SAFETY DATA SHEET

Supplier

Ladd Research

3 Ewing Place

Tel: (802) 658-4961

Fax: (802) 660-8859

Essex Junction, VT 05452 USA

Web: www.laddresearch.com

Section 1. Identification

Manufacturer

Polymeric Systems, Inc. 47 Park Avenue

Elverson, PA 19520

Tel: (610) 286-2500 Fax: (610) 286-2510

Web: polymericsystems.com

Emergency telephone

+1-703-741-5500 (Chemtrec)

Product name

Bell Jar Repair Epoxy, Part A (KNEADATITE® A/B BARS, PART A RESIN)

Code

number

30106

Specific uses

Sealants and adhesives

Section 2. Hazards identification

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the

substance or mixture

SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms



Signal word

Warning!

Hazard statements

Causes skin and eye irritation. May cause an allergic skin reaction.

Precautionary statements

General

Read label before use. Keep out of reach of children. If medical advice is needed,

have product container or label at hand.

Prevention

Wear protective gloves. Wear eye or face protection. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out

of the workplace.

Response

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. 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 attention.

Not applicable. **Storage**

Disposal

Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Hazards not otherwise

classified

None known.

Date of issue/Date of revision 06/23/2023 page 1 of 12

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Ingredient name	% by weight	CAS number
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin crystalline silica non-respirable	10 - 30 0.1 - 1	25068-38-6 14808-60-7

Canada

Name	CAS number	%
Talc , not containing asbestiform fibres	14807-96-6	30 - 60
glass, oxide, chemicals	65997-17-3	30 - 60
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	10 - 30
crystalline silica non-respirable	14808-60-7	0.1 - 1

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not

breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects

aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar.

tie, belt or waistband.

Skin contact Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash

contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly

before reuse.

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower

eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention.

Ingestion Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and

keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain

an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation No known significant effects or critical hazards.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

Ingestion Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Inhalation No specific data.

Skin contact Adverse symptoms may include the following:

irritation redness

Section 4. First aid measures

Eye contact Adverse symptoms may include the following:

pain or irritation watering redness

Ingestion No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically. Contact poison treatment specialist immediately if large quantities

Use an extinguishing agent suitable for the surrounding fire.

have been ingested or inhaled.

Specific treatments No specific treatment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

None known.

Unsuitable extinguishing media

Specific hazards arising from the chemical

No specific fire or explosion hazard.

National Fire Protection Association (U.S.A.)

Health 200

Flammability

Instability/Reactivity

Special

Hazardous thermal decomposition products

Decomposition products may include the following materials:

carbon dioxide carbon monoxide sulfur oxides

halogenated compounds metal oxide/oxides

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable

training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing

apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	CAS#	Exposure limits
crystalline silica non-respirable	14808-60-7	OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO2+5) TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2) TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable ACGIH TLV (United States, 3/2012). TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction NIOSH REL (United States, 1/2013). TWA: 0.05 mg/m³ 10 hours. Form: respirable dust OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2) TWA: 30 MG/M3 / (%SiO2+2) 8 hours. Form: Total dust.

Canada

Section 8. Exposure controls/personal protection

Occupational exposure limits		TWA (8 hours	5)	STEL	(15 min	s)	Ceiling	3		
Ingredient	List name	ppm	mg/ m³	Other	ppm	mg/ m³	Other	ppm	mg/ m³	Other	Notations
Talc , not containing asbestiform fibres	AB 4/2009	-	2	-	-	-	-	-	-	-	[a]
	BC 4/2012	-	2	- 0.1 f/cc	-	-	-	-	-	-	[b]
	ON 1/2013	-	2	-	-	-	-	-	-	-	[c] [d]
	00.40/0040	-	-	2 f/cc	-	-	-	-	-	-	
glass, oxide, chemicals	QC 12/2012 US ACGIH 4/2014	-	3 5	-	-	-	-	-	-	-	[e] [f]
	US ACGIH 4/2014 AB 4/2009	-	5	1 f/cc 1 f/cc	-	-	-	-	-	-	[g] [h] [i] [j]
	BC 4/2014	-	5 5	-	-	-	-	-	-	-	[i] [i]
	ON 1/2013	-	- 10	1 f/cc -	-	-	-	-	-	-	[k]
		-	5	- 1 f/cc	-	-	-	-	-	-	[l] [m]
	QC 1/2014	-	- 10	1 f/cc -	-	-	-	-	-	-	[n]
crystalline silica non-respirable	US ACGIH 3/2012 BC 4/2012	-	0.025 0.025	-	-	-	-	-	-	- -	[o] [p] [b]
	ON 1/2013 QC 12/2012	-	0.1 0.1	- -	-	-	-	-	- -	- -	[b] [c] [e]

Form: [a]Respirable particulate [b]Respirable [c]Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size–selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 μm at 50 per cent collection efficiency. [d]The value is for particulate matter containing no asbestos and < 1 per cent crystalline silica. [e]Respirable dust. [f]Inhalable fraction [g]Respirable fibers: length greater than 5 μM; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination. [h]Fibres [i]Fibres, total particulate [j]Inhalable [k]Fiber [l]Inhalable fraction: means that size fraction of the airborne particulate deposited anywhere in the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 100 μm at 50 per cent collection efficiency. [m]Respirable fibres: length > 5μm; aspect ratio ≥3:1, as determined by the membrane filter method at 400-450 times magnification (4-mm objective), using phase-contrast illumination. [n]RESPIRABLE FIBRES (other than respirable asbestos fibres): Objects, other than respirable asbestos fibres, longer than 5 μm, having a diameter of less than 3 μm and a ratio of length to diameter of more than 3:1. [o]Total dust. [p]Respirable fraction

Appropriate engineering controls

Environmental exposure controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 8. Exposure controls/personal protection

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be

worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the

protection time of the gloves cannot be accurately estimated.

Body protection Personal protective equipment for the body should be selected based on the task being

performed and the risks involved and should be approved by a specialist before

handling this product.

Other skin protection Appropriate footwear and any additional skin protection measures should be selected

based on the task being performed and the risks involved and should be approved by a

specialist before handling this product.

Eye/face protection Safety eyewear complying with an approved standard should be used when a risk

assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Section 9. Physical and chemical properties

Physical state Solid.

Color White.

Odor Ethereal.

Odor threshold Not available.

PH Not applicable.

Melting point Not available.

Boiling point Not available.

Flash point [Product does not sustain combustion.]

Evaporation rate Not available.

Flammability (solid, gas) Flammable in the presence of the following materials or conditions: open flames, sparks

and static discharge.

Lower and upper explosive

(flammable) limits

Not available.

Vapor pressureNot available.Vapor densityNot available.

Relative density 1.923

Solubility Easily soluble in the following materials: methanol and acetone.

Insoluble in the following materials: cold water and hot water.

Solubility in water

Auto-ignition temperature

Decomposition temperature

Viscosity

Not applicable.

Not available.

>200°C (>392°F)

Not available.

Section 10. Stability and reactivity

ReactivityNo specific test data related to reactivity available for this product or its ingredients.

Chemical stability The product is stable.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid

No specific data.

Incompatible materials

No specific data.

Hazardous decomposition

products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

No specific data.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit		24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit		24 hours 2 milligrams	-

Sensitization

No specific data.

Mutagenicity

No specific data.

Carcinogenicity

No specific data.

Conclusion/Summary

: This product contains talc in a polymer matrix. Sanding the cured product may release particles containing talc with the polymer and other components of the matrix into the air. The talc contains less than 1% crystalline silica. Appropriate evaluations ofthe use of the product should be performed to determine if exposure to talc occurs due to handling and use. If such exposures occur, appropriate precautions must be taken to prevent exposure in excess of the OSHA Permissible Exposure Limit (PEL).

Classification

Product/ingredient name	OSHA	IARC	NTP
crystalline silica non- respirable	-	1	Known to be a human carcinogen.

Reproductive toxicity

No specific data.

Teratogenicity

No specific data.

Specific target organ toxicity (single exposure)

No specific data.

Specific target organ toxicity (repeated exposure)

No specific data.

Aspiration hazard

No specific data.

Section 11. Toxicological information

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact Causes serious eye irritation.

Inhalation No known significant effects or critical hazards.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Ingestion Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact Adverse symptoms may include the following:

pain or irritation

watering

redness

Inhalation No specific data.

Skin contact Adverse symptoms may include the following:

irritation redness

Ingestion No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Long term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Potential chronic health effects

No specific data.

General Once sensitized, a severe allergic reaction may occur when subsequently exposed to

very low levels.

CarcinogenicityNo known significant effects or critical hazards.MutagenicityNo known significant effects or critical hazards.TeratogenicityNo known significant effects or critical hazards.Developmental effectsNo known significant effects or critical hazards.Fertility effectsNo known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

No specific data.

Section 12. Ecological information

Toxicity

No specific data.

Persistence and degradability

No specific data.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

Mobility in soil

Soil/water partition coefficient (Koc)

Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification

Not available.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN Number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Section 14. Transport information						
Additional information	Reportable quantity 45871.6 lbs / 20825.7 kg Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.	-	-	-	-	

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

United States

U.S. Federal regulations TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: zinc sulphide

Clean Air Act Section 112

(b) Hazardous Air Pollutants (HAPs)

Not listed

Pollutants (HAPs)

Clean Air Act Section 602 Class I Substances Not listed

Clean Air Act Section 602

Not listed

Class II Substances

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ

Not applicable.

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	10 - 30	No.	No.	No.	Yes.	No.
crystalline silica non-respirable	0.1 - 1	No.	No.	No.	No.	Yes.

Section 15. Regulatory information

	Product name	CAS number	%
Form R - Reporting requirements	zinc sulphide	1314-98-3	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts The following components are listed: SOAPSTONE; MINERAL WOOL FIBER

New York None of the components are listed.

New Jersey The following components are listed: SOAPSTONE; SILICA, QUARTZ; QUARTZ

(SiO2); ZINC compounds

Pennsylvania The following components are listed: SOAPSTONE DUST; QUARTZ (SIO2); ZINC

COMPOUNDS

Minnesota Hazardous

Substances

None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	 Maximum acceptable dosage level
Talc , not containing asbestiform fibres crystalline silica non-respirable		No. No.	 No. No.

<u>Canada</u>

WHMIS (Canada) Class D-2A: Material causing other toxic effects (Very toxic).

Class D-2B: Material causing other toxic effects (Toxic).

Canadian lists

Canadian NPRI The following components are listed: Zinc (and its compounds)

CEPA Toxic substances None of the components are listed.

Canada inventory All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted.

Japan inventory: Not determined.

Korea inventory: All components are listed or exempted. **Malaysia Inventory (EHS Register)**: Not determined.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

Philippines inventory (PICCS): All components are listed or exempted.

Taiwan inventory (CSNN): Not determined.

Substances of very high concern

None of the components are listed.

Section 16. Other information

Key to abbreviations ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

Section 16. Other information

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

References Not available.

▼ Indicates information that has changed from previously issued version.

Notice to reader

NON-WARRANTY: The information presented in this publication is based upon the research and experience of Whitford. No representation or warranty is made, however, concerning the accuracy or completeness of the information presented in this publication. Whitford makes no warranty or representation of any kind, express or implied, including without limitation any warranty of merchantability or fitness for any particular purpose, and no warranty or representation shall be implied by law or otherwise. Any products sold by Whitford are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. Whitford assumes no responsibility for the selection of products suitable to the particular purposes of any particular buyer. Whitford shall in no event be liable for any special, incidental, or consequential damages.

SAFETY DATA SHEET

Section 1. Identification

Manufacturer

Polymeric Systems, Inc. 47 Park Avenue Elverson, PA 19520

Tel: (610) 286-2500

Fax: (610) 286-2510

Web: polymericsystems.com

Emergency telephone

number

Product name

+1-703-741-5500 (Chemtrec)

Bell Jar Repair Epoxy, Part B (KNEADATITE® A/B BARS, PART B HARDENER)

Supplier

Ladd Research

3 Ewing Place

Tel: (802) 658-4961

Fax: (802) 660-8859

Essex Junction, VT 05452 USA

Web: www.laddresearch.com

Code 30106 (part B)

Specific uses Hardener.

Section 2. Hazards identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the substance or mixture

ACUTE TOXICITY (oral) - Category 4

GHS label elements
Hazard pictograms



Signal word Warning!

Hazard statements Harmful if swallowed.

Precautionary statements

Prevention Do not eat, drink or smoke when using this product. Wash hands thoroughly after

handling.

Response IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse

mouth.

Storage Not applicable.

Disposal Dispose of contents and container in accordance with all local, regional, national and

international regulations.

Hazards not otherwise

classified

None known.

Date of issue/Date of revision 06/23/2023 Page 1 of 10

Section 3. Composition/information on ingredients

Substance/mixture

Mixture

Ingredient name	% by weight	CAS number
Talc , not containing asbestiform fibres	30 - 60	14807-96-6
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	1 - 5	25068-38-6
2,4,6-tris(dimethylaminomethyl)phenol	1 - 5	90-72-2

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not

breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial

respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects

persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms

may be delayed. The exposed person may need to be kept under medical surveillance

for 48 hours.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes.

Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes

thoroughly before reuse.

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower

eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10

minutes. Get medical attention if irritation occurs.

Ingestion Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and

keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain

an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation Exposure to decomposition products may cause a health hazard. Serious effects may be

delayed following exposure.

Skin contact

No known significant effects or critical hazards.

Eye contact

No known significant effects or critical hazards.

Ingestion Harmful if swallowed.

Over-exposure signs/symptoms

InhalationNo specific data.Skin contactNo specific data.Eye contactNo specific data.IngestionNo specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician In case of inhalation of decomposition products in a fire, symptoms may be delayed. The

exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

Specific treatments

No specific treatment.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing

media

Unsuitable extinguishing

media

Use an extinguishing agent suitable for the surrounding fire.

None known.

Specific hazards arising from the chemical

No specific fire or explosion hazard.

National Fire Protection Association (U.S.A.)



Flammability

Instability/Reactivity

Special

Hazardous thermal decomposition products

Decomposition products may include the following materials:

carbon dioxide carbon monoxide nitrogen oxides

halogenated compounds metal oxide/oxides

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing

apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill

Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities

Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

No exposure limit value known.

Appropriate engineering controls

Environmental exposure controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be

worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the

protection time of the gloves cannot be accurately estimated.

Body protection Personal protective equipment for the body should be selected based on the task being

performed and the risks involved and should be approved by a specialist before

handling this product.

Other skin protection Appropriate footwear and any additional skin protection measures should be selected

based on the task being performed and the risks involved and should be approved by a

specialist before handling this product.

Eye/face protection Safety eyewear complying with an approved standard should be used when a risk

assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-

shields.

Section 9. Physical and chemical properties

Physical state

Color

Beige.

Odor

Amine-like.

Odor threshold

PH

Not available.

Melting point

Not available.

Not available.

Not available.

Not available.

Flash point Closed cup: Not applicable. [Product does not sustain combustion.]

Evaporation rate Not applicable.

Flammability (solid, gas) Flammable in the presence of the following materials or conditions: open flames, sparks

and static discharge.

Lower and upper explosive

(flammable) limits

Not available.

Vapor pressureNot available.Vapor densityNot available.

Relative density 1.923

Solubility Easily soluble in the following materials: methanol and acetone.

Solubility in water

Auto-ignition temperature

Decomposition temperature

Viscosity

Not available.

>200°C (>392°F)

Not available.

Section 10. Stability and reactivity

ReactivityNo specific test data related to reactivity available for this product or its ingredients.

Chemical stability The product is stable.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid No specific data.

Incompatible materials No specific data.

Hazardous decomposition Under normal conditions of storage and use, hazardous decomposition products should products

not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Talc , not containing asbestiform fibres	LD50 Oral	Rat	1600 mg/kg	-
2,4,6-tris (dimethylaminomethyl)phenol	LD50 Dermal	Rat	1280 mg/kg	-
(LD50 Oral	Rat	1200 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
(op.o.morrya.m/), oporty room	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
2,4,6-tris (dimethylaminomethyl)phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Skin - Mild irritant	Rat	-	0.025 Mililiters	-
	Skin - Severe irritant	Rat	-	0.25 Mililiters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-

Sensitization

No specific data.

Mutagenicity

No specific data.

Carcinogenicity

No specific data.

Conclusion/Summary

: This product contains talc in a polymer matrix. Sanding the cured product may release particles containing talc with the polymer and other components of the matrix into the air. The talc contains less than 1% crystalline silica. Appropriate evaluations of the use of the product should be performed to determine if exposure to talc occurs due to handling and use. If such exposures occur, appropriate precautions must be taken to prevent exposure in excess of the OSHA Permissible Exposure Limit (PEL).

Classification

Product/ingredient name	OSHA	IARC	NTP
Talc , not containing asbestiform fibres	-	4	-

Reproductive toxicity

No specific data.

Section 11. Toxicological information

Teratogenicity

No specific data.

Specific target organ toxicity (single exposure)

No specific data.

Specific target organ toxicity (repeated exposure)

No specific data.

Aspiration hazard

No specific data.

Information on the likely

Not available.

routes of exposure

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Inhalation Exposure to decomposition products may cause a health hazard. Serious effects may

be delayed following exposure.

Skin contact No known significant effects or critical hazards.

Ingestion Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contactNo specific data.InhalationNo specific data.Skin contactNo specific data.IngestionNo specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Long term exposure

Potential immediate Not available.

effects

Potential delayed effects Not available.

Potential chronic health effects

No specific data.

GeneralNo known significant effects or critical hazards.CarcinogenicityNo known significant effects or critical hazards.MutagenicityNo known significant effects or critical hazards.TeratogenicityNo known significant effects or critical hazards.Developmental effectsNo known significant effects or critical hazards.Fertility effectsNo known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
Oral	1980.5 mg/kg
Dermal	49739.8 mg/kg

Section 12. Ecological information

Toxicity

No specific data.

Persistence and degradability

No specific data.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
reaction product: bisphenol-A- (epichlorhydrin); epoxy resin	2.64 to 3.78	31	low
2,4,6-tris (dimethylaminomethyl)phenol	0.219	-	low

Mobility in soil

Soil/water partition coefficient (Koc)

Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification

Not applicable.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN Number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-

Section 14. Transport information					
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations TSCA 8(a) PAIR: Siloxanes and Silicones, di-Me, reaction products with silica

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112

(b) Hazardous Air Pollutants (HAPs) Not listed

Clean Air Act Section 602 Class I Substances Not listed

Clean Air Act Section 602 Class II Substances

Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ Not applicable.

SARA 311/312

Classification Immediate (acute) health hazard

Composition/information on ingredients

Name	%	hazard	Sudden release of pressure	Reactive	health	Delayed (chronic) health hazard
Talc , not containing asbestiform fibres reaction product: bisphenol-A-(epichlorhydrin); epoxy resin 2,4,6-tris(dimethylaminomethyl)phenol	30 - 60 1 - 5 1 - 5	No. No.	No. No.	No. No.	Yes. Yes.	No. No.

State regulations

Massachusetts The following components are listed: SOAPSTONE; MINERAL WOOL FIBER

New York None of the components are listed.

New Jersey The following components are listed: SOAPSTONE; SILICA, QUARTZ; QUARTZ (SiO2)

Pennsylvania The following components are listed: SOAPSTONE DUST; QUARTZ (SIO2)

Section 15. Regulatory information

Minnesota Hazardous

Substances

None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive		Maximum acceptable dosage level
Talc , not containing asbestiform fibres crystalline silica non-respirable		No. No.	-	No. No.

Canada inventory

All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): Not determined.

Japan inventory: Not determined.

Korea inventory: All components are listed or exempted. **Malaysia Inventory (EHS Register)**: Not determined.

New Zealand Inventory of Chemicals (NZIoC): Not determined.

Philippines inventory (PICCS): Not determined. Taiwan inventory (CSNN): Not determined.

Substances of very high concern

None of the components are listed.

Section 16. Other information

Key to abbreviations ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships.

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

References

Not available.

Indicates information that has changed from previously issued version.

Notice to reader

NON-WARRANTY: The information presented in this publication is based upon the research and experience of Whitford. No representation or warranty is made, however, concerning the accuracy or completeness of the information presented in this publication. Whitford makes no warranty or representation of any kind, express or implied, including without limitation any warranty of merchantability or fitness for any particular purpose, and no warranty or representation shall be implied by law or otherwise. Any products sold by Whitford are not warranted as suitable for any particular purpose to the buyer. The suitability of any products for any purpose particular to the buyer is for the buyer to determine. Whitford assumes no responsibility for the selection of products suitable to the particular purposes of any particular buyer. Whitford shall in no event be liable for any special, incidental, or consequential damages.