SAFETY DATA SHEET

CRACKBOND® 2100 MV-LPL PART A



Section 1. Identification

GHS product identifier : CRACKBOND® 2100 MV-LPL PART A

Other means of identification Product type

Relevant identified uses of the substance or mixture and uses advised against

Supplier's details :

Emergency telephone number (with hours of operation)

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 2A
SKIN SENSITIZATION - Category 1

GERM CELL MUTAGENICITY - Category 2 AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms







Signal word : Warning

Hazard statements : H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

H341 - Suspected of causing genetic defects.

H411 - Toxic to aquatic life with long lasting effects.





Section 2. Hazards identification

Precautionary statements

Prevention : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves, protective clothing and eye or face protection.

P273 - Avoid release to the environment.

P261 - Avoid breathing vapor.

P264 - Wash thoroughly after handling.

P272 - Contaminated work clothing must not be allowed out of the workplace.

Response : P391 - Collect spillage.

> P308 + P313 - IF exposed or concerned: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse.

P363 - Wash contaminated clothing before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water.

P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.

: P405 - Store locked up. **Storage**

P501 - Dispose of contents and container in accordance with all local, regional, national **Disposal**

and international regulations.

Hazards not otherwise

classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of

identification

Ingredient name	%	CAS number
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer	≥65 - ≤90	25085-99-8
1,3-bis(2,3-Epoxypropoxy)-2,2-Dimethylpropane Formaldehyde, Oligomeric Reaction Products with 1-Chloro-	≤15 ≤15	17557-23-2 9003-36-5
2,3-Epoxypropane and Phenol 2,3-Epoxypropyl o-tolyl ether	≤5	2210-79-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation. If a generic chemical name is shown and/or the CAS number is not disclosed, the specific chemical identity has been withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower evelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.



Section 4. 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 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. 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. 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

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 : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:

pain or irritation watering redness

Inhalation : No known significant effects or critical hazards.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : No known significant effects or critical hazards.

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

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

quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may

be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

: In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products Decomposition products may include the following materials: carbon dioxide carbon monoxide

halogenated compounds

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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized 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 nonemergency 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.



Section 7. Handling and storage

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. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, : including any incompatibilities

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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-,	None.
homopolymer	
1,3-bis(2,3-Epoxypropoxy)-2,2-Dimethylpropane	None.
Formaldehyde, Oligomeric Reaction Products with 1-Chloro-	None.
2,3-Epoxypropane and Phenol	
2,3-Epoxypropyl o-tolyl ether	None.

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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.

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 8. Exposure controls/personal protection

Skin 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.

Respiratory protection

Based on the hazard and potential for exposure, if required, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color

Odor : Slight.

: Not available. **Odor threshold** pН : Not available. Melting point/freezing point : Not available. Boiling point, initial boiling : Not available.

point, and boiling range

Flash point : Not available. : Not available. **Evaporation rate** : Not available. **Flammability** : Not available. Lower and upper explosion

limit/flammability limit Vapor pressure

: Not available. Relative vapor density : Not available. : Not available. Relative density Not available. Solubility : Not applicable.

Partition coefficient: noctanol/water

Flow time (ISO 2431)

Auto-ignition temperature : Not available. **Decomposition temperature** : Not available. **Viscosity** : Not available.

: Not available.

Volatile organic compounds :





Section 9. Physical and chemical properties and safety characteristics

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity: No 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.

Conditions to avoid : No specific data.

Incompatible materials: Reactive or incompatible with the following materials: oxidizing materials.

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

Product/ingredient name	Result	Species	Dose	Exposure
1,3-bis(2,3-Epoxypropoxy) -2,2-Dimethylpropane	LD50 Oral	Rat	4500 mg/kg	-
2,3-Epoxypropyl o-tolyl ether	LC50 Inhalation Dusts and mists LD50 Oral		6090 mg/m³ 4 g/kg	4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Formaldehyde, Oligomeric Reaction Products with 1-Chloro-2,3-Epoxypropane and Phenol	Skin - Mild irritant	Rabbit	-	24 hours 500 µL	-
2,3-Epoxypropyl o-tolyl ether	Skin - Severe irritant	Rabbit	-	24 hours 500 uL	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.





Section 11. Toxicological information

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely

: Routes of entry anticipated: Oral, Dermal, Inhalation.

routes of exposure

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: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Adverse symptoms may include the following:

pain or irritation

watering redness

Inhalation : No known significant effects or critical hazards.

Skin contact: Adverse symptoms may include the following:

irritation redness

Ingestion : No known significant effects or critical hazards.

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

Short term exposure

Potential immediate

effects

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Long term exposure

Potential immediate

: No known significant effects or critical hazards.

effects

Potential delayed effects: No known significant effects or critical hazards.

Potential chronic health effects

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

very low levels.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity : Suspected of causing genetic defects.

Reproductive toxicity: No known significant effects or critical hazards.





Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	- 1 all (111 g)	Dermal (mg/kg)	(gases)	(vapors)	Inhalation (dusts and mists) (mg/ I)
1,3-bis(2,3-Epoxypropoxy)-2,2-Dimethylpropane 2,3-Epoxypropyl o-tolyl ether	4500	N/A	N/A	N/A	N/A
	4000	N/A	N/A	N/A	6.09

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Formaldehyde, Oligomeric Reaction Products with 1-Chloro-2,3-Epoxypropane and Phenol	2.7	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc})

: 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 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 empty 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.





Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxirane, 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bis-, homopolymer)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxirane, 2,2'-[(1-methylethylidene)bis (4,1-phenyleneoxymethylene)] bis-, homopolymer)
Transport hazard class(es)	-	9	9
Packing group	-	III	III
Environmental hazards	No.	Yes.	Yes.

AERG: 171

Additional information

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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.

Transport in bulk according : Not available. to IMO instruments

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) PAIR: 2,3-Epoxypropyl o-tolyl ether

TSCA 8(a) CDR Exempt/Partial exemption: Not determined Clean Water Act (CWA) 311: 1-Chloro-2,3-epoxypropane

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** Listed

Clean Air Act Section 602

: Not listed

Class I Substances

Clean Air Act Section 602 **Class II Substances**

: Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed





Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals)

: Not listed

SARA 302/304

Composition/information on ingredients

			SARA 302 TPQ		SARA 304 F	RQ.
Name	%	EHS	(lbs)	(gallons)	(lbs)	(gallons)
1-Chloro-2,3-epoxypropane	≤0.001	Yes.	1000	101.6	100	10.2

SARA 304 RQ : 50000000 lbs / 22700000 kg

SARA 311/312

Classification : SKIN CORROSION/IRRITATION - Category 2

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SKIN SENSITIZATION - Category 1

GERM CELL MUTAGENICITY - Category 2

Composition/information on ingredients

Name	%	Classification
Oxirane, 2,2'-[≥65 - ≤90	SKIN CORROSION/IRRITATION - Category 2
(1-methylethylidene)bis		SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
(4,1-phenyleneoxymethylene)] bis-, homopolymer		SKIN SENSITIZATION - Category 1
1,3-bis(2,3-Epoxypropoxy)	≤15	SKIN CORROSION/IRRITATION - Category 2
-2,2-Dimethylpropane		SKIN SENSITIZATION - Category 1
Formaldehyde, Oligomeric	≤15	SKIN CORROSION/IRRITATION - Category 2
Reaction Products with 1-Chloro- 2,3-Epoxypropane and Phenol		SKIN SENSITIZATION - Category 1
2,3-Epoxypropyl o-tolyl ether	≤5	SKIN CORROSION/IRRITATION - Category 2
		SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
		SKIN SENSITIZATION - Category 1
		GERM CELL MUTAGENICITY - Category 2

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

▲ WARNING: This product can expose you to 1-Chloro-2,3-epoxypropane, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

	_	Maximum acceptable dosage level
1-Chloro-2,3-epoxypropane	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.





Section 15. Regulatory information

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

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

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
GERM CELL MUTAGENICITY - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

History

Date of issue/Date of

revision

: 07/01/2023

Date of previous issue : 08/30/2018

Version : 3.0

Prepared by : KMK Regulatory Services Inc.

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 = International Convention for the Prevention of Pollution From Ships, 1973

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

SAFETY DATA SHEET

CRACKBOND® 2100 MV-LPL PART B



Section 1. Identification

GHS product identifier : CRACKBOND® 2100 MV- LPL Part B

Other means of identification

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Product type :

Relevant identified uses of the substance or mixture and uses advised against

Identified uses :

Supplier's details :

Emergency telephone number (with hours of operation)

.

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 SKIN CORROSION/IRRITATION - Category 1B

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) -

Category 1

GHS label elements

Hazard pictograms







Signal word

: Danger

Hazard statements

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H350 - May cause cancer.

H372 - Causes damage to organs through prolonged or repeated exposure. (respiratory

tract)



Section 2. Hazards identification

Precautionary statements

Prevention: P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.

P260 - Do not breathe vapor.

P270 - Do not eat, drink or smoke when using this product.

P264 - Wash hands thoroughly after handling.

P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.

Response : P314 - Get medical attention if you feel unwell.

P308 + P313 - IF exposed or concerned: Get medical attention.

P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable

for breathing. Immediately call a POISON CENTER or physician.

P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER

or physician. Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing

before reuse. Immediately call a POISON CENTER or physician.

P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash

contaminated clothing before reuse.

P333 + P313 - If skin irritation or rash occurs: Get medical attention.

P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or physician.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazards not otherwise

classified

: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification

Ingredient name	%	CAS number
Crystalline silica, respirable powder	≥25 - ≤50	14808-60-7
Epoxy polyamine adduct	≥25 - ≤50	-
Proprietary ingredient 1	≥10 - ≤19	-
Proprietary ingredient 2	≥3 - <5	-
Proprietary ingredient 3	≥3 - ≤5	-

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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





Section 4. First aid measures

Description of necessary first aid measures

Eye contact

: Get medical attention immediately. Call a poison center or physician. 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 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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

: Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a 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

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No known significant effects or critical hazards.

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion : Adverse symptoms may include the following:

stomach pains

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





Section 4. First aid measures

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.

Specific treatments
Protection of first-aiders

- : No specific treatment.
- No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

: None known.

Specific hazards arising from the chemical

Hazardous thermal decomposition products

: In a fire or if heated, a pressure increase will occur and the container may burst.

 Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

If specialized 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





Section 6. Accidental release measures

Spill

: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

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. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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. See also Section 8 for additional information on hygiene measures.

including any incompatibilities

Conditions for safe storage, : 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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Crystalline silica, respirable powder	OSHA PEL Z3 (United States, 6/2016). TWA: 250 mppcf / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 mg/m³ / (%SiO2+2) 8 hours. Form: Respirable NIOSH REL (United States, 10/2016). TWA: 0.05 mg/m³ 10 hours. Form: Respirable dust OSHA PEL (United States, 6/2016). TWA: 50 µg/m³ 8 hours. Form: Respirable dust ACGIH TLV (United States, 3/2017). TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction
Epoxy polyamine adduct Proprietary ingredient 1 Proprietary ingredient 2 Proprietary ingredient 3	None. None. None. ACGIH TLV (United States, 3/2017). Absorbed through skin. C: 0.1 mg/m³ NIOSH REL (United States, 10/2016). Absorbed through skin. CEIL: 0.1 mg/m³



Section 8. Exposure controls/personal protection

Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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.

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 and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin 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.

Respiratory protection

: Based on the hazard and potential for exposure, if required, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid. [Viscous.]

Color Grev. Odor : Amine-like. : Not available. **Density** Not available. Odor threshold pН Not available. **Melting point** Not available. : Not available. **Boiling point** : Not available. Flash point : Not available. **Evaporation rate** Flammability (solid, gas) : Not available.





Section 9. Physical and chemical properties

Lower and upper explosive

(flammable) limits

Not available.

Vapor pressure

Vapor density

Specific gravity

: Not available. : Not available. : Not available. : Not available.

Partition coefficient: n-

octanol/water

Solubility

Viscosity

: Not available.

Auto-ignition temperature Decomposition temperature

: Not available. : Not available. : Not available. : Not available.

Flow time (ISO 2431)

Volatile organic compounds : 5 g/L (tested per EPA CFR 40, Part 60, method 24)

Section 10. Stability and reactivity

Reactivity

: No 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.

Conditions to avoid

: No specific data.

Incompatible materials

: Reactive or incompatible with the following materials: oxidizing materials.

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

Product/ingredient name	Result	Species	Dose	Exposure
Proprietary ingredient 2	LC50 Inhalation Vapor LD50 Oral		2900 mg/m³ 1690 mg/kg	1 hours
Proprietary ingredient 3	LC50 Inhalation Gas. LD50 Oral		700 ppm 930 mg/kg	1 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Proprietary ingredient 2	Eyes - Severe irritant	Rabbit	-	0.1 mL	-
	Skin - Severe irritant	Rabbit	-	0.5 mL	-
Proprietary ingredient 3	Eyes - Severe irritant	Rabbit	-	24 hours 50 μg	-
	Skin - Severe irritant	Rabbit	-	24 hours 750 ug	_

Sensitization

There is no data available.

Mutagenicity

There is no data available.





Section 11. Toxicological information

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
Crystalline silica, respirable powder	-	1	Known to be a human carcinogen.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name	Category	Target organs
Proprietary ingredient 2	Category 3	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Target organs
Crystalline silica, respirable powder	Category 1	respiratory tract

Aspiration hazard

Name	Result
Proprietary ingredient 1	ASPIRATION HAZARD - Category 1

Information on the likely

routes of exposure

: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact: Causes severe burns. May cause an allergic skin reaction.

Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation : No known significant effects or critical hazards.

Skin contact: Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur

Ingestion: Adverse symptoms may include the following:

stomach pains

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

Short term exposure

Potential immediate : No known significant effects or critical hazards.

effects

Potential delayed effects: No known significant effects or critical hazards.





Section 11. Toxicological information

Long term exposure

Potential immediate

effects

Mutagenicity

: No known significant effects or critical hazards.

Potential delayed effects

: No known significant effects or critical hazards.

Potential chronic health effects

General

: Causes damage to organs through prolonged or repeated exposure. Once sensitized, a

severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

No known significant effects or critical hazards.No known significant effects or critical hazards.

Teratogenicity

Developmental effects

: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Inhalation (gases)	1684.4 mg/kg 27603.6 mg/kg 150565.2 ppm 276 mg/L

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Proprietary ingredient 1 Proprietary ingredient 3	1.34 0.18	2.69	low 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 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 empty 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.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN2735	UN2735	UN2735
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S. (Proprietary ingredient 1, Proprietary ingredient 2)	AMINES, LIQUID, CORROSIVE, N.O.S. (Proprietary ingredient 1, Proprietary ingredient 2)	AMINES, LIQUID, CORROSIVE, N.O.S. (Proprietary ingredient 1, Proprietary ingredient 2)
Transport hazard class(es)	8	8	8
Packing group	III	III	III
Environmental hazards	No.	No.	No.

AERG : 153

Additional information

The limited quantity exception can be used for the transportation of this item. Certain restrictions may apply in regards to sizes and packaging. For further information, refer to the applicable transportation of dangerous goods regulation.

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

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** : Listed

Clean Air Act Section 602

: Not listed

Class I Substances

Clean Air Act Section 602 Class II Substances

: Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed





Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : ACUTE TOXICITY (oral) - Category 4

SKIN CORROSION/IRRITATION - Category 1B

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1A

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) -

Category 1

Composition/information on ingredients

Name	Classification
Crystalline silica, respirable powder	CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory
Epoxy polyamine adduct	tract) (inhalation) - Category 1 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2
Description in condition 4	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
Proprietary ingredient 1	SKIN CORROSION/IRRITATION - Category 1C SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 ASPIRATION HAZARD - Category 1
Proprietary ingredient 2	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4
	ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4
	SKIN CORROSION/IRRITATION - Category 1A SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Business is an disable	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Proprietary ingredient 3	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1B

SARA 313

There is no data available.

State regulations

Massachusetts : The following components are listed: Crystalline silica, respirable powder; Glass, oxide,

chemicals; Proprietary ingredient 3

New York None of the components are listed.

New Jersey The following components are listed: Crystalline silica, respirable powder; Proprietary

ingredient 3

Pennsylvania The following components are listed: Crystalline silica, respirable powder; Proprietary

ingredient 3

California Prop. 65

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



Section 15. Regulatory information

Ingredient name	level	Maximum acceptable dosage level
Crystalline silica, respirable powder Titanium dioxide	-	-

Section 16. Other information

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Procedure used to derive the classification

Classification	Justification
SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1A	Calculation method

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