

EPOXYBOND® POOL PUTTY RESIN BLACK

SDS Revision Date (mm/dd/yyyy): 03/14/2019

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SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on label

: **EPOXYBOND® POOL PUTTY RESIN BLACK**

Product code(s) : **Z530108, 530317**

Recommended use of the chemical and restrictions on use

: Epoxy resin
Use pattern: Consumer use
Recommended restrictions: None known

Chemical family : Mixture

Name, address, and telephone number of supplier:

Atlas Minerals and Chemicals Inc.

1227 Valley Road
Mertztown, PA, USA
19539

Name, address, and telephone number of the manufacturer:

Refer to supplier

Supplier's Telephone # : 610-682-7171

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887 (Outside U.S.)

SECTION 2. HAZARD IDENTIFICATIONS

Classification of the chemical

Solid, stiff, white colored putty / Mild characteristic odor

Most important hazards: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification:

Skin corrosion/irritation – Category 2

Serious eye damage/eye irritation – Category 2

Skin sensitization – Category 1

Label elements

Hazard pictogram(s)



Signal Word

WARNING!

Hazard statement(s)

Causes skin irritation

Causes serious eye irritation

May cause an allergic skin reaction

Precautionary statement(s)

Wash face, hands and any exposed skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Contaminated work clothing should not be allowed out of the workplace.

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

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Store locked up.

Dispose of contents/container to an approved waste disposal plant.

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Other hazards

Toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>CAS No</u>	<u>Weight-%</u>
Bisphenol A epoxy resin	25068-38-6	15.0 – 20.0
Trimethylolpropane triacrylate	15625-89-5	1.0 – 5.0
Silica, fumed	112945-52-5	1.0 – 3.0
Titanium dioxide (white and gray only)	13463-67-7	0.5 – 1.5
Zinc oxide (white only)	1314-13-2	0.5 – 1.5
Silica, Quartz	14808-60-7	0.1 – 1.0

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Eye contact* : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Skin contact* : Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- Inhalation* : Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.
- Ingestion* : If conscious give large amounts of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects

- Symptoms** : Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause irritation to the mucous membranes and upper respiratory tract. May cause gastrointestinal irritation, nausea, diarrhea, and vomiting. Inhalation may aggravate respiratory problems. May aggravate pre-existing skin conditions.

Indication of any immediate medical attention and special treatment needed

- Notes to Physician** : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Water spray (fog). Carbon dioxide (CO₂). Dry chemical. Foam.
- Unsuitable extinguishing media* : Not determined.

Specific hazards arising from the chemical

- : Not determined.

Hazardous combustion products

- : Carbon monoxide. Carbon dioxide (CO₂). Aldehydes.

Protective equipment and precautions for firefighters

- : As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate area and fight fire from a safe distance. Cool exposed containers with water to prevent rupturing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

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- Personal precautions** : Use personal protective equipment as required.
- Environmental precautions** : Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

- Methods for containment** : Prevent further leakage or spillage if safe to do so.
- Methods for clean-up** : Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on safe handling** : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Discard shoes that become saturated with product. Do not ingest.

Conditions for safe storage, including any incompatibilities

- Storage conditions** : Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep out of the reach of children. Avoid excessive heat in storage to maintain product quality. Keep away from incompatible materials.
- Incompatible materials** : Mineral acids. Bases. Amines. Mercaptans. Oxidizers.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

<u>Chemical name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>NIOSH IDLH</u>
Silica, fumed 112945-52-5	–	TWA: 20 Million particles per cubic feet	–
Titanium dioxide 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³
Zinc oxide 1314-13-2	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume
Silica, Quartz 14808-60-7	TWA: 0.025 mg/m ³ respirable fraction	(vacated) TWA: 0.1 mg/m ³ respirable dust : (30)/(%SiO ₂ + 2) mg/m ³ TWA total dust : (250)/(%SiO ₂ + 5) mppcf TWA respirable fraction : (10)/(%SiO ₂ + 2) mg/m ³ TWA respirable fraction	IDLH: 50 mg/m ³ respirable dust TWA: 0.05 mg/m ³ respirable dust

Appropriate engineering controls

- Engineering controls** : Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

- Eye/face protection** : Refer to 29 CFR 1910.133 for eye and face protection regulations. Chemical goggles or equivalent eye protection.
- Skin and body protection** : Refer to 29 CFR 1910.138 for appropriate skin and body protection. Wear suitable protective clothing.
- Respiratory protection** : Refer to 29 CFR 1910.134 for respiratory protection requirements. Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection.

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General hygiene considerations

- : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state/appearance/color

- : Solid, stiff white colored putty

Odor : Mild characteristic

Odor threshold : Not determined

pH : Not applicable

Melting point/freezing point : Not determined

Initial boiling point and boiling range

- : 149 °C / 300 °F

Flash point (method) : 232 °C / 450 °F (COC)

Evaporation rate : Not applicable

Flammability (solid, gas) : Not determined

Upper flammability limits : Not determined

Lower flammability limit : Not determined

Vapor pressure : Very low

Vapor density (remarks) : Heavier than air (Air=1)

Specific gravity : 1.8-2.2

Water solubility : Insoluble in water

Solubility in other solvents : Not determined

Partition coefficient : Not applicable

Auto-ignition temperature : Not determined

Decomposition temperature : Not determined

Kinematic viscosity : Not applicable

Dynamic viscosity : Not applicable

Explosive properties : Not determined

Oxidizing properties : Not determined

VOC content : None

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not reactive under normal conditions.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions

- : None under normal processing.

Hazardous polymerization : Hazardous polymerization does not occur.

Conditions to avoid : See Sec. 7 Handling & Storage.

Incompatible materials : Mineral acids. Bases. Amines. Mercaptans. Oxidizers.

Hazardous decomposition products

- : Carbon monoxide. Carbon dioxide (CO₂). Aldehydes.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

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Eye contact : Causes serious eye irritation.
Skin contact : Causes skin irritation.
Inhalation : Do not inhale.
Ingestion : Do not ingest.

Component Information

<u>Chemical name</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Bisphenol A epoxy resin 25068-38-6	= 11400 mg/kg (Rat)	–	–
Trimethylolpropane triacrylate 15625-89-5	= 5190 µL/kg (Rat)	= 5000 mg/kg (Rabbit)	–
Silica, fumed 112945-52-5	= 3160 mg/kg (Rat)	–	–
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	–	–
Zinc oxide 1314-13-2	> 5000 mg/kg (Rat)	–	–
Silica, Quartz 14808-60-7	= 500 mg/kg (Rat)	–	–

Information on physical, chemical and toxicological effects

Symptoms : Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization : May cause an allergic skin reaction.

Carcinogenicity : The table below indicates whether each agency has listed any ingredient as a carcinogen. However, the product as a whole has not been tested. Silica (quartz) is a possible carcinogen when it appears as a respirable dust. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

<u>Chemical name</u>	<u>ACGIH</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
Silica, fumed 112945-52-5		Group 3		
Titanium dioxide 13463-67-7		Group 2B		X
Silica, Quartz 14808-60-7	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Group 3 IARC components are "not classifiable as human carcinogens"

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Numerical measures of toxicity

: Not determined.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Toxic to aquatic life with long lasting effects.
Persistence/degradability : Not determined.
Bioaccumulation : Not determined.
Mobility : Not determined.
Other adverse effects : Not determined.

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SECTION 13. DISPOSAL CONSIDERATIONS

- Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.
- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None	Not regulated	Not regulated	None	
49CFR/DOT Additional Information	None				
TDG	None	Not regulated	Not regulated	None	
TDG Additional Information	None				
IMDG	None	Not regulated	Not regulated	None	
IMDG Additional Information	None				
ICAO/IATA	None	Not regulated	Not regulated	None	
ICAO/IATA Additional Information	None				

- Special precautions for user** : Appropriate advice on safety must accompany the package.
- Environmental hazards** : Contains material that may be harmful in the environment. See ECOLOGICAL INFORMATION, Section 12.
- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : This information is not available.

SECTION 15. REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal Chemical lists:

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Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Bisphenol A / epichlorohydrin resin	25068-38-6	Yes	N/Ap	N/Av	No	N/Ap
Trimethylol propane triacrylate	15625-89-5	Yes	N/Ap	N/Av	No	N/Ap
Amorphous Precipitated Silica	112945-52-5	NL	N/Ap	N/Av	No	N/Ap
Titanium dioxide	13463-67-7	Yes	N/Ap	N/Av	No	N/Ap
Crystalline silica	14808-60-7	Yes	None.	None.	No	N/Ap
Zinc oxide	1314-13-2	Yes	N/Ap	N/Ap	No	N/Ap

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Bisphenol A / epichlorohydrin resin	25068-38-6	No	N/Ap	No	No	No	No	No	No
Trimethylol propane triacrylate	15625-89-5	No	N/Ap	No	No	Yes	No	No	No
Amorphous Precipitated Silica	112945-52-5	No	N/Ap	No	No	No	No	No	No
Titanium dioxide	13463-67-7	Yes	, unbound particles	No	Yes	Yes	Yes	Yes	Yes
Crystalline silica	14808-60-7	Yes	orne particles of res	No	Yes	Yes	Yes	Yes	Yes
Zinc oxide	1314-13-2	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes

Canadian Information:

Canadian Environmental Protection Act (CEPA): All ingredients are present on the DSL.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this Safety Data Sheet contains all the information required by the CPR.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Bisphenol A / epichlorohydrin resin	25068-38-6	N/Av	Present	Present	(7)-1283	KE-24000	Present	HSR003180
Trimethylol propane triacrylate	15625-89-5	239-701-3	Present	Present	(2)-1010	KE-29547	Present	HSR003398
Amorphous Precipitated Silica	112945-52-5	231-545-4 (as Silicon dioxide)	Present	Present	(1)-548	KE-30953	Present	No information available.
Titanium dioxide	13463-67-7	236-675-5	Present	Present	(5)-5225; (1)-558	KE-33900	Present	May be used as a single component chemical under an appropriate group standard
Crystalline silica	14808-60-7	238-878-4	Present	Present	(1)-548	KE-29983	Present	HSR003125
Zinc oxide	1314-13-2	215-222-5	Present	Present	(1)-561	KE-35565	Present	HSR003104

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SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
ATE: Acute Toxicity Estimate CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations CSA: Canadian Standards Association
DOT: Department of Transportation
ECHA: European Chemicals Agency
ECOTOX: U.S. EPA Ecotoxicology Database
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IECSC: Inventory of Existing Chemical Substances
IMDG: International Maritime Dangerous Goods
IOC: Inventory of Chemicals
IUCLID: International Uniform Chemical Information Database
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet / Material Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2014.
2. International Agency for Research on Cancer Monographs, searched 2015.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2015 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheets from manufacturer.
5. US EPA Title III List of Lists - October 2012 version.
6. California Proposition 65 List - December 26, 2014 version

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Preparation Date (mm/dd/yyyy): 05/02/2015

Reviewed Date SDS (dd/mm/yyyy): 03/14/2019

Revision No.: 2

Revision Information: All sections modified

Other special considerations for handling: Provide adequate information, instruction and training for operators.

Prepared by:

Atlas Minerals and Chemicals Inc.
1227 Valley Road
Mertztown, PA 19539
610-682-7171



DISCLAIMER

Atlas Minerals & Chemicals, Inc. expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this Safety Data Sheet does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed or altered in any way without the expressed knowledge and permission of Atlas Minerals & Chemicals, Inc.

END OF DOCUMENT

EPOXYBOND® POOL PUTTY HARDENER

SDS Preparation Date (mm/dd/yyyy): 04/26/2015

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **EPOXYBOND® POOL PUTTY HARDENER**

Product Code(s) : **Z530105, 530317, 530318**

Recommended use of the chemical and restrictions on use

: Epoxy putty hardener
Use pattern: Consumer use
Recommended restrictions None known.

Chemical family : Mixture

**Name, address, and telephone number
of the supplier:**

Atlas Minerals and Chemicals Inc.

1227 Valley Road
Mertztown, PA, USA
19539

Supplier's Telephone # : 610-682-7171

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887
(Outside U.S.).

**Name, address, and telephone number
of the manufacturer:**

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Solid, stiff putty. Ammonia odor.

Most important hazards: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Hazard classification

Acute Toxicity, inhalation - Category 4 (mist)
Eye Damage/Irritation - Category 2A
Skin sensitization - Category 1
Reproductive Toxicity - Category 2

Label elements

Hazard pictogram(s)



Signal Word

WARNING!

Hazard statement(s)

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Harmful if inhaled.
Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of damaging fertility.

Precautionary statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust and fume.
Use only outdoors or in a well-ventilated area.
Wash hands thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/clothing and eye/face protection.

IF exposed or concerned: Get medical attention/advice.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists, get medical advice/attention.

Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
Burning produces obnoxious and toxic fumes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause respiratory tract irritation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
Talc	Hydrous magnesium silicate; Non-asbestiform talc	14807-96-6	15.0 - 20.0
Silica	Crystalline quartz	14808-60-7	1.0 - 5.0
Diethylenetriamine	DETA	111-40-0	1.0 - 5.0
Bisphenol A	Epoxy Resin	80-05-7	1.0 - 5.0

The exact concentrations of the above listed chemicals are being withheld as a trade secret.

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SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
- Inhalation* : IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Call a POISON CENTER or doctor/physician if you feel unwell.
- Skin contact* : IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash before re-use.
- Eye contact* : For eye contact, flush with running water for at least 15 minutes. If eye irritation persists, get medical advice/attention.

Most important symptoms and effects, both acute and delayed

- : May cause eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Harmful if inhaled. Symptoms may include coughing, choking and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. May cause an allergic skin reaction. May cause an allergic respiratory reaction (e.g. asthma) in some hypersensitive individuals. Suspected of damaging fertility.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Carbon dioxide (CO₂); Dry chemical; Alcohol-resistant foam; water fog .
- Unsuitable extinguishing media* : Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Not considered flammable.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Carbon dioxide and carbon monoxide.

Special protective equipment and precautions for firefighters

- Protective equipment for fire-fighters* : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.
- Special fire-fighting procedures* : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

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Environmental precautions : Do not allow material to contaminate ground water system. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

: Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Sweep up and shovel into suitable containers for disposal. Pick up and transfer to properly labelled containers. Contact the proper local authorities. Refer to Section 13 for disposal of contaminated material.

Special spill response procedures

: Contact appropriate local and provincial environmental authorities for assistance and/or reporting requirements.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Use only in well-ventilated areas. Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Keep container tightly closed. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Persons with recurrent skin eczema or sensitization problems should be excluded from working with this product. Once a person is sensitized, no further exposure to the material that caused the sensitization should be permitted. Contaminated work clothing must not be allowed out of the workplace.

Conditions for safe storage : Store in cool/well ventilated area. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking.

Incompatible materials : Oxidizing agents, mineral acids .

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Talc	2 mg/m ³ (particulate matter containing no asbestos and <1% crystalline silica, respirable fraction)	N/Av	N/Av	N/Av
Silica	0.025 mg/m ³ (respirable fraction)	N/Av	0.1 mg/m ³ (final rule limit)	N/Av
Diethylenetriamine	1 ppm	N/Av	N/Av	N/Av
Bisphenol A	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

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- | | |
|---------------------------------------|--|
| Respiratory protection | : Use only in well-ventilated areas. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Use explosion-proof equipment. In case of insufficient ventilation wear suitable respiratory equipment. |
| Skin protection | : If airborne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02. Advice should be sought from respiratory protection specialists. |
| Eye / face protection | : Wear protective gloves/clothing. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves. |
| Other protective equipment | : Wear eye/face protection. Wear as appropriate: Tightly fitting safety goggles |
| General hygiene considerations | : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards. |
| | : Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Do not take contaminated clothing home. Handle in accordance with good industrial hygiene and safety practice. |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|--|-----------------------------|
| Appearance | : Solid, stiff putty |
| Odor | : Ammonia odor. |
| Odor threshold | : No information available. |
| pH | : No information available. |
| Melting/Freezing point | : No information available. |
| Initial boiling point and boiling range | : 232°C (450°F) |
| Flash point | : 254°C (490°F) |
| Flashpoint(Method) | : Cleveland closed cup |
| Evaporation rate (BuAe = 1) | : No information available. |
| Flammability (solid, gas) | : Not applicable. |
| Lower flammable limit (% by vol.) | : Not applicable. |
| Upper flammable limit (% by vol.) | : Not applicable. |
| Oxidizing properties | : None known. |
| Explosive properties | : Not explosive |
| Vapour pressure | : Very low |
| Vapour density | : (Air = 1) > 1 |
| Relative density / Specific gravity | : 2.0 |
| Solubility in water | : Slightly soluble. |
| Other solubility(ies) | : No information available. |
| Partition coefficient: n-octanol/water or Coefficient of water/oil distribution | : No information available. |
| Auto-ignition temperature | : No information available. |
| Decomposition temperature | : No information available. |
| Viscosity | : No information available. |
| Volatiles (% by weight) | : none |

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Volatile organic Compounds (VOC's)

: No information available.

Absolute pressure of container

: Not applicable.

Flame projection length

: Not applicable.

Other physical/chemical comments

: No additional information.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: Hazardous polymerization does not occur.

Conditions to avoid

: Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials.

Incompatible materials

: Oxidizing agents, mineral acids .

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: YES

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: May cause respiratory irritation. Symptoms may include coughing and sneezing.

Sign and symptoms ingestion

: Ingestion may cause severe irritation to the mouth, throat and stomach.

Sign and symptoms skin

: May cause skin irritation. Symptoms may include redness, itching and swelling.

Sign and symptoms eyes

: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Eye Damage/Irritation - Category 2A Causes serious eye irritation.

Potential Chronic Health Effects

: May cause damage to the lungs through prolonged or repeated exposure if inhaled.

Mutagenicity

: Not expected to be mutagenic in humans.

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Carcinogenicity : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Contains crystalline silica. Crystalline silica is classified as carcinogenic by IARC (Group 1), the ACGIH (Category A2) and the NTP (Group 1 - Known human carcinogen). However, Crystalline silica is listed as causing cancer only when it's particles are airborne and of a respirable size. Airborne respirable particles are not expected for this product, based on the intended use and form of the product as a whole.

Reproductive effects & Teratogenicity

: This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Reproductive Toxicity - Category 2 Suspected of damaging fertility.

Sensitization to material : This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification: Skin sensitization - Category 1
May cause allergic skin reaction.
May cause an allergic respiratory reaction (e.g. asthma) in some hypersensitive individuals.

Specific target organ effects : The substance or mixture is not classified as specific target organ toxicant, single exposure.
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials : No information available.

Toxicological data : The calculated ATE values for this mixture are:
ATE dermal = 27949.24
ATE inhalation (dust/mist) = 3.18
ATE oral = 18516.21
Acute Toxicity, inhalation - Category 4 (mist)

See the following table for individual ingredient acute toxicity data.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Talc	N/Av	N/Av	N/Av
Silica	N/Av	N/Av	N/Av
Diethylenetriamine	0.07mg/L	1080 mg/kg	678mg/kg
Bisphenol A	>0.113mg/L (no deaths)	3300 mg/kg	3600mg/kg

Other important toxicological hazards

: None reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Contains material that may be harmful in the environment. Do not release, unmonitored, into the environment.

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Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Talc	14807-96-6	>100mg/L (Zebra fish)	N/Av	None.
Silica	14808-60-7	N/Av	N/Av	N/Av
Diethylenetriamine	111-40-0	0.43mg/L (Guppy)	>10mg/L (Three-spined stickleback)	None.
Bisphenol A	80-05-7	4.6mg/L (Fathead minnow)	N/Av	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Talc	14807-96-6	N/Av	N/Av	None.
Silica	14808-60-7	N/Av	N/Av	N/Av
Diethylenetriamine	111-40-0	2mg/L (Water flea)	5.6mg/L (Water flea)	None.
Bisphenol A	80-05-7	10.2mg/L (Water flea)	>3.146mg/L (Water flea)	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Talc	14807-96-6	N/Av	N/Av	None.
Silica	14808-60-7	N/Av	N/Av	N/Av
Diethylenetriamine	111-40-0	187mg/L (Green algae)	10mg/L (Green algae)	None.
Bisphenol A	80-05-7	2.73mg/L (Green algae)	N/Av	None.

Persistence and degradability

: No data is available on the product itself.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Talc (CAS 14807-96-6)		no known bioaccumulation
Diethylenetriamine (CAS 111-40-0)	-1.58	> 2.8 <= 6.3
Bisphenol A (CAS 80-05-7)	3.4	5.1-13.3

Mobility in soil : The product itself has not been tested.

Other Adverse Environmental effects

: None known.

SECTION 13. DISPOSAL CONSIDERATIONS

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- Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.
- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information					
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information					
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information					
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information					

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

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<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Talc	14807-96-6	Yes	N/Ap	N/Av	No	N/Ap
Silica	14808-60-7	Yes	N/Ap	N/Av	No	N/Ap
Diethylenetriamine	111-40-0	Yes	N/Ap	N/Av	No	N/Ap
Bisphenol A	80-05-7	Yes	N/Ap	N/Av	Yes	1%

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Talc	14807-96-6	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Silica	14808-60-7	Yes	airborne particles of	No	Yes	Yes	Yes	Yes	Yes
Diethylenetriamine	111-40-0	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Bisphenol A	80-05-7	No	N/Ap	No	Yes	No	Yes	Yes	No

Canadian Information:

Canadian Environmental Protection Act (CEPA): . All ingredients are present on the DSL.

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	New Zealand IOC
Talc	14807-96-6	238-877-9	Present	Present	(1)-468; (1)-468	KE-32773	Present	No information available.
Silica	14808-60-7	238-878-4	Present	Present	(1)-548	KE-29983	Present	HSR003125
Diethylenetriamine	111-40-0	203-865-4	Present	Present	(2)-159	KE-10470	Present	HSR002966
Bisphenol A	80-05-7	201-245-8	Present	Present	(4)-123	KE-23982	Present	HSR003399

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
ATE: Acute Toxicity Estimate

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CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
ECHA: European Chemicals Agency
ECOTOX: U.S. EPA Ecotoxicology Database
EINECS: European Inventory of Existing Commercial chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IECSC: Inventory of Existing Chemical Substances
IMDG: International Maritime Dangerous Goods
IOC: Inventory of Chemicals
IUCLID: International Uniform Chemical Information Database
KECI: Korean Existing Chemicals Inventory
KECL: Korean Existing Chemicals List
LC: Lethal Concentration
LD: Lethal Dose
MA: Massachusetts
MN: Minnesota
N/Ap: Not Applicable
N/Av: Not Available
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NOEC: No observable effect concentration
NTP: National Toxicology Program
OECD: Organisation for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
PICCS: Philippine Inventory of Chemicals and Chemical Substances
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet / Material Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2014.
- 2. International Agency for Research on Cancer Monographs, searched 2015.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2015 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - October 2012 version.
- 6. California Proposition 65 List - December 26, 2014 version

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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<u>Prepared for:</u> Atlas Minerals and Chemicals Inc. 1227 Valley Road Mertztown, PA 19539 610-682-7171	
<u>Prepared by:</u> ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	

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