Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 04.25.2019

Steel Reinforced Epoxy Resin - Syringe - Part A

SECTION 1: Identification

Product identifier

Product name: Steel Reinforced Epoxy Resin - Syringe - Part A
Product code: 50165, 50176

Recommended use of the product and restriction on use

Relevant identified uses: Adhesive Part A
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
J-B Weld Company, LLC
400 CMH Road
Sulphur Springs, TX 75482
903-885-7696
info@jbweld.com

Emergency telephone number:

United States
InfoTrac
Transportation Emergencies (24 hour): 800-535-5053
Poison Control Centers (24 hour): medical emergencies 800-222-1222

SECTION 2: Hazard(s) identification

GHS classification:

Skin irritation, category 2
Eye irritation, category 2A
Skin sensitization, category 1

Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

Precautionary statements:

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 Contaminated work clothing must not be allowed out of the workplace.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P362 Take off contaminated clothing and wash before reuse
P321 Specific treatment (see supplemental first aid instructions on this label).
P333+P313 If skin irritation or a rash occurs: Get medical advice/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/attention
P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 1333-86-4	Carbon Black	<1
CAS number: 14807-96-6	Talc	1-5
CAS number: 14808-60-7	Silica, crystalline	<1
CAS number: 2425-79-8	1,4-Butanediol Diglycidyl Ether	10-15
CAS number: 2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	1-5
CAS number: 25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	<50
CAS number: 28064-14-4	Epoxy Phenol	30-35
CAS number: 106-89-8	Epichlorohydrin	<0.1

Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several

minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention
Take off all contaminated clothing
Gently blot or brush away excess product
Wash with plenty of lukewarm, gently flowing water
Get medical advice if skin irritation occurs or you feel unwell

After eye contact:

Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open
Remove contact lenses, if present and easy to do so
Continue rinsing for 15-20 minutes
Get medical advice if eye irritation persists
Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention

After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Causes eye irritation. Symptoms include corneal redness, tearing, burning, and inflammation
Causes skin irritation and may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time)

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Treat symptomatically

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion
Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing
Wear recommended personal protective equipment (see Section 8)

Environmental precautions:

Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing
Sweep or scoop up solid material while minimizing dust generation
Dispose of contents / container in accordance with local regulations

Reference to other sections:

Section 8: Personal Protective Equipment

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.
Avoid breathing dust.
Do not eat, drink, smoke or use personal products when handling chemical substances.
Wear recommended personal protective equipment (see Section 8).

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.
Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Talc	14807-96-6	OSHA PEL Ceiling 20 mppcf
	Silica, crystalline	14808-60-7	OSHA Z-3 TWA 0.1 mg/m³ (Respirable fraction); 0.3 mg/m³ (Total dust)
	Carbon Black	1333-86-4	OSHA PEL TWA 3.5 mg/m³
	Epichlorohydrin	106-89-8	OSHA PEL TWA 5 ppm (19 mg/m³) [skin]
ACGIH	Talc	14807-96-6	ACGIH TLV TWA 2 mg/m³; (Inhalable particulate matter containing no asbestos and < 1% crystalline silica)
	Silica, crystalline	14808-60-7	ACGIH TLV TWA 0.025 mg/m³ (Respirable fraction)
	Carbon Black	1333-86-4	TLV-TWA 3.0 mg/m³
	Epichlorohydrin	106-89-8	ACGIH TLV TWA 0.5 ppm [skin]

Steel Reinforced Epoxy Resin - Syringe - Part A

Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	Talc	14807-96-6	NIOSH REL TWA 2.0 mg/m³
	Silica, crystalline	14808-60-7	NIOSH TWA 0.05 mg/m³
	Carbon Black	1333-86-4	NIOSH REL TWA 0.1 mg PAHs/m3 [Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)]
	Carbon Black	1333-86-4	NIOSH REL TWA 3.5 mg/m³ Ca
	Epichlorohydrin	106-89-8	NIOSH IDLH 75 ppm

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Black paste
Odor	Ethereal
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Product does not sustain combustion.

Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	1.199
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	>200°C (>392°F)
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

VOC Content (%)	<3%

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
Open flames, sparks and static discharge.

Incompatible materials:
None known.

Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Route	Result
1,4-Butanediol Diglycidyl Ether	dermal	LD50 - Rabbit - 1,130 mg/kg
Epichlorohydrin	dermal	LD50 Dermal - Rabbit - 300 mg/kg
	inhalation	LC50 - Rat - 250 ppm - 8 h
	oral	LD50 - Rat - 90 mg/kg

Skin corrosion/irritation

Assessment:

Causes skin irritation

Product data:

No data available.

Substance data:

Name	Result
Bisphenol-A-(Epichlorhydrin) Epoxy	Causes skin irritation.
Epoxy Phenol	Causes skin irritation
1,4-Butanediol Diglycidyl Ether	Causes skin irritation.
Epichlorohydrin	Corrosive to the skin.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation

Product data:

No data available.

Substance data:

Name	Result
(3-Glycidoxypropyl)trimethoxysilane	Causes serious eye damage.
Bisphenol-A-(Epichlorhydrin) Epoxy	Causes serious eye irritation.
Epoxy Phenol	Causes eye irritation
1,4-Butanediol Diglycidyl Ether	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction

Product data:

No data available.

Substance data:

Name	Result
Bisphenol-A-(Epichlorhydrin) Epoxy	May cause an allergic skin reaction.
Epoxy Phenol	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals
1,4-Butanediol Diglycidyl Ether	May cause an allergic skin reaction.
Epichlorohydrin	May cause sensitisation by skin contact.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

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Name	Species	Result
Silica, crystalline	Not applicable	Component may cause cancer.
Carbon Black	Not applicable.	The carcinogenic classification only applies to airborne, unbound particles of respirable size.
Epichlorohydrin	Not applicable	Suspected human carcinogen.

International Agency for Research on Cancer (IARC):

Name	Classification
Talc	Group 3 - Not classifiable as to its carcinogenicity to humans
Silica, crystalline	Group 1 - Carcinogenic to humans
Carbon Black	Group 2B - Possibly carcinogenic to humans
Epichlorohydrin	Group 2A - Probably carcinogenic to humans

National Toxicology Program (NTP):

Name	Classification
Silica, crystalline	Known to be human carcinogens
Epichlorohydrin	Reasonably anticipated to be human carcinogens

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Silica, crystalline	Component affects the lungs through repeated exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.
Symptoms related to the physical, chemical and toxicological characteristics:
No data available.
Other information:
No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.
Chronic (long-term) toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.
Persistence and degradability
Product data: No data available.
Substance data: No data available.
Bioaccumulative potential
Product data: No data available.
Substance data: No data available.
Mobility in soil
Product data: No data available.
Substance data: No data available.
Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:
It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN 3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Bisphenol-A-(Epichlorhydrin) Epoxy, Epoxy Phenol)

Steel Reinforced Epoxy Resin - Syringe - Part A

UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	None
Special precautions for user	None
EmS number	F-A, S-F
Stowage category	A
Excepted quantities	E1
Limited quantity	5 Kg

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN 3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Bisphenol-A-(Epichlorhydrin) Epoxy, Epoxy Phenol)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	None
Special precautions for user	None
ERG code	9L
Excepted quantities	E1
Passenger and cargo	400 Kg
Cargo aircraft only	400 Kg
Limited quantity	30 Kg G

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	Listed
28064-14-4	Epoxy Phenol	Listed
2425-79-8	1,4-Butanediol Diglycidyl Ether	Listed
2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	Listed
14807-96-6	Talc	Listed
14808-60-7	Silica, crystalline	Listed
1333-86-4	Carbon Black	Listed
106-89-8	Epichlorohydrin	Listed

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances:

106-89-8	Epichlorohydrin	Listed

SARA Section 313 toxic chemicals:

25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	Not Listed
28064-14-4	Epoxy Phenol	Not Listed
2425-79-8	1,4-Butanediol Diglycidyl Ether	Not Listed
2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	Not Listed
14807-96-6	Talc	Not Listed
14808-60-7	Silica, crystalline	Not Listed
1333-86-4	Carbon Black	Not Listed
106-89-8	Epichlorohydrin	Listed

CERCLA:

106-89-8	Epichlorohydrin	Listed	100 Lbs

RCRA:

106-89-8	Epichlorohydrin	Listed	U041

Section 112(r) of the Clean Air Act (CAA):

106-89-8	Epichlorohydrin	Listed

Massachusetts Right to Know:

25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	Not Listed
28064-14-4	Epoxy Phenol	Not Listed
2425-79-8	1,4-Butanediol Diglycidyl Ether	Not Listed
2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	Not Listed
14807-96-6	Talc	Listed
14808-60-7	Silica, crystalline	Listed
1333-86-4	Carbon Black	Listed

New Jersey Right to Know:

1333-86-4	Carbon Black	Listed
25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	Listed
28064-14-4	Epoxy Phenol	Not Listed
2425-79-8	1,4-Butanediol Diglycidyl Ether	Not Listed
2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	Not Listed
14807-96-6	Talc	Listed
14808-60-7	Silica, crystalline	Listed

New York Right to Know:

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1333-86-4	Carbon Black	Not Listed
25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	Listed
28064-14-4	Epoxy Phenol	Not Listed
2425-79-8	1,4-Butanediol Diglycidyl Ether	Not Listed
2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	Not Listed
14807-96-6	Talc	Not Listed
14808-60-7	Silica, crystalline	Not Listed

Pennsylvania Right to Know:

1333-86-4	Carbon Black	Listed
25068-38-6	Bisphenol-A-(Epichlorhydrin) Epoxy	Listed
28064-14-4	Epoxy Phenol	Not Listed
2425-79-8	1,4-Butanediol Diglycidyl Ether	Not Listed
2530-83-8	(3-Glycidoxypropyl)trimethoxysilane	Not Listed
14807-96-6	Talc	Listed
14808-60-7	Silica, crystalline	Listed

California Proposition 65:

⚠**WARNING:** This product can expose you to chemicals including Silica, crystalline quartz and Bounded Carbon Black which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

⚠**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.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 2-0-0

HMIS: 2-0-0

Initial preparation date: 04.25.2019

End of Safety Data Sheet

Steel Reinforced Epoxy Hardener - Slow Cure - Part B

SECTION 1: Identification

Product identifier

Product name: Steel Reinforced Epoxy Hardener - Slow Cure - Part B
Product code: 50165

Recommended use of the product and restriction on use

Relevant identified uses: Adhesive Part B
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
J-B Weld Company, LLC
400 CMH Road
Sulphur Springs, TX 75482
903-885-7696
info@jbweld.com

Emergency telephone number:

United States
InfoTrac
Transportation Emergencies (24 hour): 1-800-535-5053

SECTION 2: Hazard(s) identification

GHS classification:

Serious eye damage, category 1
Skin irritation, category 2
Skin sensitization, category 1
Acute toxicity (oral), category 4
Specific target organ toxicity - repeated exposure, category 2

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H318 Causes serious eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H302 Harmful if swallowed.
H373 May cause damage to kidneys through prolonged or repeated oral exposure.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P272 Contaminated work clothing must not be allowed out of the workplace.
P270 Do not eat, drink or smoke when using this product.
P321 Specific treatment (see supplemental first aid instructions on this label).
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P362 Take off contaminated clothing and wash before reuse
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
P314 Get medical advice/attention if you feel unwell
P501 Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 14807-96-6	Talc	5-10
CAS number: 14808-60-7	Silica, crystalline	<1
CAS number: 112-57-2	Tetraethylenepentamine	1-5
CAS number: 68410-23-1	Fatty acids, C18-unsaturated, dimers	<30
CAS number: 112-24-3	Triethylenetetramine	1-5
CAS number: 13463-67-7	Titanium Dioxide	1-5
CAS number: 135108-88-2	Methylenedioxide, Polymer with Benzene	5-10
CAS number: 100-51-6	Benzyl Alcohol	5-10
CAS number: 90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	5-10
CAS number: 21645-51-2	Aluminum hydroxide	<0.1
CAS number: 7631-86-9	Silica, amorphous	<0.1

CAS number: 1314-23-4	Zirconium oxide	<0.1
CAS number: 68953-36-6	Fatty acids, tall-oil, Oligomeric R	10-15

Additional Information:

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of the OSHA Hazard Communication Standard (29 CFR §1910.1200).

CAS # 14808-60-7 is classified as a carcinogen in its inhalable form. Since the substance in this product is not inhalable, the product itself is not classified as a carcinogen in the form presented.

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention

After skin contact:

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention

After eye contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist

After swallowing:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Oral toxicity symptoms include dizziness, drowsiness, headache, breathing difficulties, nausea, vomiting, abdominal pain, and lowering of consciousness. Adverse effects are dependent on exposure (dose, concentration, contact time)

Dermal exposure may cause an allergic skin reaction. Symptoms may include irritation, redness, pain, rash, inflammation, itching, burning and dermatitis

Eye contact may result in irritation, redness, pain, inflammation, itching, burning, tearing, corneal damage and loss of vision

Skin contact may result in redness, pain, burning and inflammation

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time)

May cause damage to organs through prolonged or repeated exposure

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Treat symptomatically

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion

Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Wear recommended personal protective equipment (see Section 8)

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Sweep or scoop up solid material while minimizing dust generation

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Section 8: Personal Protective Equipment

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.

Avoid breathing dust.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Wear recommended personal protective equipment (See Section 8).

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Keep container dry.
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Talc	14807-96-6	OSHA PEL Ceiling 20 mppcf
	Titanium Dioxide	13463-67-7	OSHA PEL TWA 15 mg/m³ (Total dust)
	Silica, amorphous	7631-86-9	OSHA PEL 8 Hour TWA: 15 mg/m3
	Silica, crystalline	14808-60-7	OSHA Z-3 TWA 0.1 mg/m³ (Respirable fraction); 0.3 mg/m³ (Total dust)
	Zirconium oxide	1314-23-4	OSHA TWA: 5 mg/m³
	Zirconium oxide	1314-23-4	OSHA STEL: 10 mg/m³
	Aluminum hydroxide	21645-51-2	OSHA TWA: 5 mg/m³ (Respirable fraction)
	Aluminum hydroxide	21645-51-2	OSHA TWA: 15 mg/m³ (Total dust)
ACGIH	Aluminum hydroxide	21645-51-2	ACGIH TLV 8Hr TWA: 1.0 mg/m³, respirable fraction (Aluminum metal and insoluable compounds)
	Talc	14807-96-6	ACGIH TLV TWA 2 mg/m³; (Inhalable particulate matter containing no asbestos and < 1% crystalline silica)
	Titanium Dioxide	13463-67-7	ACGIH TLV TWA 10 mg/m³
	Silica, crystalline	14808-60-7	ACGIH TLV TWA 0.025 mg/m³ (Respirable fraction)
	Zirconium oxide	1314-23-4	8-Hour Exposure Limit (TLV-TWA): 5 mg/m³
	Zirconium oxide	1314-23-4	15-minute STEL: 10 mg/m³
WEEL	Benzyl Alcohol	100-51-6	WEEL TWA 10.0 ppm
	Tetraethylenepentamine	112-57-2	TWA 8-hr: 6.0 mg/m³; 1.0 ppm
	Triethylenetetramine	112-24-3	WEEL TWA 1.0 ppm
NIOSH	Silica, amorphous	7631-86-9	NIOSH 10 hr Time Weighted Avg (TWA): 6 mg/m3
	Aluminum hydroxide	21645-51-2	NIOSH REL 10Hr TWA: 10.0 mg/m³, total
	Silica, crystalline	14808-60-7	NIOSH TWA 0.05 mg/m³
	Aluminum hydroxide	21645-51-2	NIOSH REL 10Hr TWA: 10.0 mg/m³, respirable fraction
	Talc	14807-96-6	NIOSH REL TWA 2.0 mg/m³
	Silica, amorphous	7631-86-9	NIOSH IDLH: 3000 mg/m3
	Titanium Dioxide	13463-67-7	IDLH: 5,000 mg/m³

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Zirconium oxide	1314-23-4	NIOSH Recommended exposure limit (REL) [for up to a 10-hour workday during a 40-hour workweek]: 5 mg/m³
	Zirconium oxide	1314-23-4	NIOSH STEL: 10 mg/m³
	Zirconium oxide	1314-23-4	NIOSH Immediately dangerous to life or health (IDLH) concentration: 25 mg/m³

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.
Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.
Wash hands before breaks and at the end of work.
Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	White paste
Odor	Amine-like
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	Not determined or not available.
Flash point (closed cup)	Product does not sustain combustion.

Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Not determined or not available.
Vapor density	1.07
Density	Not determined or not available.
Relative density	Not determined or not available.
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	>200°C (>392°F)
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

VOC Content (%)	<3%

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
Open flames, sparks and static discharge.

Incompatible materials:
None known.

Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment:
Harmful if swallowed

Product data: No data available.

Substance data:

Name	Route	Result
2,4,6-tris(dimethylaminomethyl)phenol	oral	LD50 - Rat - 1,200 mg/kg
Benzyl Alcohol	oral	LD50 Rabbit: 1,040 mg/kg
	inhalation	LC50 Rat: 4.178 mg/L (4 hr)
Aluminum hydroxide	oral	LD50 Rat: >5000 mg/kg
	inhalation	LC50 (4 h): 888 - 2,300 mg/m^3 air (rat)

Skin corrosion/irritation

Assessment:

Causes skin irritation

Product data:

Skin testing was performed per the OECD 435 methods using the Corrositex testing process, indicating the product is non-corrosive to skin.

Substance data:

Name	Result
Tetraethylenepentamine	Causes severe skin burns and eye damage.
Fatty acids, C18-unsaturated, dimers	Causes skin irritation.
Fatty acids, tall-oil, Oligomeric R	Causes skin irritation.
2,4,6-tris(dimethylaminomethyl)phenol	Causes skin irritation.
Methylenedioxide, Polymer with Benzene	Causes severe skin burns and eye damage.
Triethylenetetramine	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment:

Causes serious eye damage

Product data:

No data available.

Substance data:

Name	Result
Fatty acids, C18-unsaturated, dimers	Causes serious eye damage.
Fatty acids, tall-oil, Oligomeric R	Causes serious eye irritation.
2,4,6-tris(dimethylaminomethyl)phenol	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment:

May cause an allergic skin reaction

Product data:
No data available.

Substance data:

Name	Result
Fatty acids, C18-unsaturated, dimers	May cause an allergic skin reaction.
Fatty acids, tall-oil, Oligomeric R	May cause an allergic skin reaction.
Tetraethylenepentamine	May cause an allergic skin reaction.
Methylenedioxide, Polymer with Benzene	May cause an allergic skin reaction.
Triethylenetetramine	May cause an allergic skin reaction.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Species	Result
Titanium Dioxide	Not applicable.	Airborne, unbound particles of respirable size are known to cause cancer.
Silica, crystalline	Not applicable	Component may cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Talc	Group 3 - Not classifiable as to its carcinogenicity to humans
Titanium Dioxide	Group 2B
Silica, crystalline	Group 1 - Carcinogenic to humans
Silica, amorphous	Group 3 - Not classifiable as to its carcinogenicity to humans

National Toxicology Program (NTP):

Name	Classification
Silica, crystalline	Known to be human carcinogens

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:
No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data:

Name	Result
Fatty acids, tall-oil, Oligomeric R	May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Assessment:

May cause damage to organs through prolonged or repeated exposure

Product data:

No data available.

Substance data:

Name	Result
Methylenedioxide, Polymer with Benzene	May cause damage to kidneys through prolonged or repeated oral exposure.
Silica, crystalline	Component affects the lungs through repeated exposure.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Triethylenetetramine	LC50 - Daphnia magna (Water flea) - 33.9 mg/L - 48 h
Aluminum hydroxide	LC50 (16 days): 430 - 3,910 µg/L
	NOEC (33 days): 71.5 - 558.1 µg/L
	EC50 (48 h): 1.5 - 2.56 mg/L

Chronic (long-term) toxicity

Assessment: Toxic to aquatic life with long lasting effects.

Product data: No data available.

Substance data:

Name	Result
Fatty acids, C18-unsaturated, dimers	LC50 - Danio rerio - 7.07 mg/L - 96 hr
	EC50 - Daphnia magna - 5.18 mg/L - 48 hr
	ErC50 - Pseudokirchneriella subcapitata - 4.11 mg/L - 72 hr

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, N.O.S. (Fatty acids, C18-unsaturated, dimers)
UN transport hazard class(es)	9 
Packing group	III
Environmental hazards	According to the provisions set forth 49 CFR § 171.4(c)(1), the requirements relating to Marine Pollutants do not apply to non-bulk packagings transported by motor vehicle, rail car or aircraft unless all or part of the transportation is by vessel.
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

68410-23-1	Fatty acids, C18-unsaturated, dimers	Listed
68953-36-6	Fatty acids, tall-oil, Oligomeric R	Listed
14807-96-6	Talc	Listed
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Listed
135108-88-2	Methylenedioxide, Polymer with Benzene	Listed
100-51-6	Benzyl Alcohol	Listed
112-57-2	Tetraethylenepentamine	Listed

13463-67-7	Titanium Dioxide	Listed
112-24-3	Triethylenetetramine	Listed
14808-60-7	Silica, crystalline	Listed
21645-51-2	Aluminum hydroxide	Listed
7631-86-9	Silica, amorphous	Listed
1314-23-4	Zirconium oxide	Listed

Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.
Export notification under TSCA Section 12(b): None of the ingredients are listed.
SARA Section 302 extremely hazardous substances: None of the ingredients are listed.
SARA Section 313 toxic chemicals: None of the ingredients are listed.
CERCLA: None of the ingredients are listed.
RCRA: None of the ingredients are listed.
Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.
Massachusetts Right to Know:

68410-23-1	Fatty acids, C18-unsaturated, dimers	Not Listed
68953-36-6	Fatty acids, tall-oil, Oligomeric R	Not Listed
14807-96-6	Talc	Listed
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Not Listed
135108-88-2	Methylenedioxide, Polymer with Benzene	Not Listed
100-51-6	Benzyl Alcohol	Listed
112-57-2	Tetraethylenepentamine	Listed
13463-67-7	Titanium Dioxide	Listed
112-24-3	Triethylenetetramine	Listed
14808-60-7	Silica, crystalline	Listed
21645-51-2	Aluminum hydroxide	Not Listed
7631-86-9	Silica, amorphous	Listed
1314-23-4	Zirconium oxide	Listed

New Jersey Right to Know:

68410-23-1	Fatty acids, C18-unsaturated, dimers	Not Listed
68953-36-6	Fatty acids, tall-oil, Oligomeric R	Not Listed
14807-96-6	Talc	Listed
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Not Listed
135108-88-2	Methylenedioxide, Polymer with Benzene	Not Listed
100-51-6	Benzyl Alcohol	Not Listed
112-57-2	Tetraethylenepentamine	Listed
13463-67-7	Titanium Dioxide	Listed
112-24-3	Triethylenetetramine	Listed
14808-60-7	Silica, crystalline	Listed
21645-51-2	Aluminum hydroxide	Not Listed
7631-86-9	Silica, amorphous	Listed
1314-23-4	Zirconium oxide	Not Listed

New York Right to Know:

68410-23-1	Fatty acids, C18-unsaturated, dimers	Not Listed
68953-36-6	Fatty acids, tall-oil, Oligomeric R	Not Listed
14807-96-6	Talc	Not Listed
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Not Listed
135108-88-2	Methylenedioxide, Polymer with Benzene	Not Listed
100-51-6	Benzyl Alcohol	Not Listed
112-57-2	Tetraethylenepentamine	Listed
13463-67-7	Titanium Dioxide	Listed
112-24-3	Triethylenetetramine	Listed
14808-60-7	Silica, crystalline	Not Listed
21645-51-2	Aluminum hydroxide	Not Listed
7631-86-9	Silica, amorphous	Not Listed
1314-23-4	Zirconium oxide	Not Listed

Pennsylvania Right to Know:

68410-23-1	Fatty acids, C18-unsaturated, dimers	Not Listed
68953-36-6	Fatty acids, tall-oil, Oligomeric R	Not Listed
14807-96-6	Talc	Listed
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	Not Listed
135108-88-2	Methylenedioxide, Polymer with Benzene	Not Listed
100-51-6	Benzyl Alcohol	Listed
112-57-2	Tetraethylenepentamine	Listed
13463-67-7	Titanium Dioxide	Listed
112-24-3	Triethylenetetramine	Listed
14808-60-7	Silica, crystalline	Listed
21645-51-2	Aluminum hydroxide	Not Listed
7631-86-9	Silica, amorphous	Listed
1314-23-4	Zirconium oxide	Not Listed

California Proposition 65:

⚠**WARNING:** This product can expose you to chemicals including Silica, crystalline quartz and Titanium Dioxide which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 3-0-0

HMIS: 3-0-0

Initial preparation date: 04.26.2019

Revision date: 05.12.2020

End of Safety Data Sheet