



EUCLID CHEMICAL

Version: 2.0
Revision Date: 12/10/2018

This is a kit that contains the following components:

EUCO 452 GEL P PART A

EUCO 452 GEL P PART B

SAFETY DATA SHEET

1. Identification

Product identifier: EUCO 452 GEL P PART A

Product Code: 002P 01

Recommended use and restriction on use

Recommended use: Sealant

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Euclid Admixture Canada Inc.
2835 Grand-Allee
Saint Hubert QC J4T 2R4
CA

Contact person:

EH&S Department

Telephone:

(450)465-2233

Emergency telephone number:

1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2B
Skin sensitizer	Category 1
Carcinogenicity	Category 1A

Unknown toxicity - Health

Acute toxicity, oral	19.04 %
Acute toxicity, dermal	19.04 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment	99.86 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Causes eye irritation.
May cause an allergic skin reaction.
May cause cancer.

Precautionary Statements

Prevention: Wash thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: 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 water. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Bisphenol A Polyglycidyl Ether Resin	25068-38-6	40 - 70%
Clay	1332-58-7	15 - 40%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	10 - 30%
2-Butoxyethanol (Glycol ether)	111-76-2	0.1 - 1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
Inhalation:	Move to fresh air.
Skin Contact:	If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
Eye contact:	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms:	No data available.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	No data available.
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5. Fire-fighting measures

General Fire Hazards:	No unusual fire or explosion hazards noted.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Clay - Respirable fraction.	TWA	2 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Clay - Total dust.	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Clay - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
	TWA	5 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Clay - Total dust.	TWA	15 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.05 mg/m ³	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
	OSHA AC	0.025 mg/m ³	US. OSHA Specifically Regulated Substances



Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	T PEL	0.05 mg/m ³	(29 CFR 1910.1001-1053) (03 2016) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
2-Butoxyethanol (Glycol ether)	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	50 ppm 240 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	Type	Exposure Limit Values	Source
Clay - Respirable.	TWA	2 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Clay - Respirable dust.	TWA	5 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Clay - Respirable fraction.	TWA	2 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 2017)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.10 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
2-Butoxyethanol (Glycol ether) (Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)	200 mg/g (Creatinine in urine)	ACGIH BEI (03 2013)

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment**General information:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection:

Wear goggles/face shield.

Skin Protection

Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Gray
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	> 260 °C > 500 °F
Flash Point:	> 93 °C > 200 °F (Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	1.4 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.075
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation. May cause an allergic skin reaction.
Eye contact:	Causes eye irritation.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	Not classified for acute toxicity based on available data.
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**Specified substance(s):**

Bisphenol A Polyglycidyl Ether Resin LD 50 (Rat): > 2,000 mg/kg

Clay LD 50 (Rat): > 5,000 mg/kg

2-Butoxyethanol (Glycol ether) LD 50 (Rat): 1,746 mg/kg

Dermal**Product:** ATEmix: 5,197.89 mg/kg**Inhalation****Product:****Specified substance(s):**

Clay LC 50 (Rat): > 20 mg/l

2-Butoxyethanol (Glycol ether) LC 50 (Rat): 2.2 mg/l

Repeated dose toxicity**Product:** No data available.**Skin Corrosion/Irritation****Product:** No data available.**Specified substance(s):**Bisphenol A Polyglycidyl Ether Resin Irritating.
in vivo (Rabbit): Slightly irritating Experimental result, Key study

2-Butoxyethanol (Glycol ether) in vivo (Rabbit): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation**Product:** No data available.**Specified substance(s):**Bisphenol A Polyglycidyl Ether Resin Strongly irritating.
Rabbit, 24 hrs: Slightly irritating

2-Butoxyethanol (Glycol ether) Rabbit, 24 - 72 hrs: Irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline Silica (Quartz)/ Silica Sand Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin LC 50 (Oncorhynchus mykiss, 96 h): 2 mg/l Experimental result, Key study

2-Butoxyethanol (Glycol ether) LC 50 (Oncorhynchus mykiss, 96 h): 1,464 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin EC 50 (Daphnia magna, 48 h): 1.8 mg/l Experimental result, Key study

2-Butoxyethanol (Glycol ether) EC 50 (Daphnia magna, 48 h): 1,800 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

2-Butoxyethanol (Glycol ether) NOAEL (Danio rerio, 21 d): > 100 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin NOEC (Daphnia magna, 21 d): 0.3 mg/l Experimental result, Key study

2-Butoxyethanol (Glycol ether) NOEC (Daphnia magna, 21 d): 100 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin Bioconcentration Factor (BCF): 31 Aquatic sediment QSAR, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin Log Kow: 2.64 - 3.78 25 °C Yes Experimental result, Key study

2-Butoxyethanol (Glycol ether) Log Kow: 0.83

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
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Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
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Naphthalenesulfonic acid
(Zinc compound)
2-Butoxyethanol (Glycol
ether)

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Bisphenol A Polyglycidyl Ether Resin	10000 lbs
Clay	10000 lbs
Crystalline Silica (Quartz)/ Silica Sand	10000 lbs
2-Butoxyethanol (Glycol ether)	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

For more information go to www.P65Warnings.ca.gov.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand

US. Massachusetts RTK - Substance List

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

VOC: When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
0 g/l

Regulatory VOC (less water and exempt solvent) : 2 g/l

VOC Method 310 : 0.14 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision
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Revision Date: 12/10/2018

Version #: 2.0

Further Information: No data available.



EUCLID CHEMICAL

Version: 2.0
Revision Date: 12/10/2018

Disclaimer:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Product identifier: EUCO 452 GEL P PART B

Product Code: 002P 01

Recommended use and restriction on use

Recommended use: Curative

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Euclid Admixture Canada Inc.
2835 Grand-Allee
Saint Hubert QC J4T 2R4
CA

Contact person:

Telephone:

Emergency telephone number:

EH&S Department

(450)465-2233

1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Skin sensitizer	Category 1
Carcinogenicity	Category 1A
Toxic to reproduction	Category 2

Unknown toxicity - Health

Acute toxicity, oral	19.6 %
Acute toxicity, dermal	20.54 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

Acute hazards to the aquatic environment	97.02 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Causes serious eye irritation.
May cause an allergic skin reaction.
May cause cancer.
Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention: Wash 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: 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 water. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Specific treatment (see on this label). Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients
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Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Clay	1332-58-7	30 - 60%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	10 - 30%
Bisphenol A	80-05-7	1 - 5%
Tetraethylene pentamine	112-57-2	1 - 5%
Trade Secret	Trade Secret	0.5 - 1.5%

2-Butoxyethanol (Glycol ether)	111-76-2	0.1 - 1%
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* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Clay - Respirable fraction.	TWA	2 mg/m ³	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Clay - Total dust.	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Clay - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
	TWA	5 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Clay - Total dust.	TWA	15 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.05 mg/m ³	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
	OSHA AC	0.025 mg/m ³	US. OSHA Specifically Regulated Substances



Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	T PEL	0.05 mg/m ³	(29 CFR 1910.1001-1053) (03 2016) US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m ³	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Trade Secret	TWA	1 ppm	US. ACGIH Threshold Limit Values (2011)
2-Butoxyethanol (Glycol ether)	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	50 ppm 240 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	Type	Exposure Limit Values	Source
Clay - Respirable.	TWA	2 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Clay - Respirable dust.	TWA	5 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Clay - Respirable fraction.	TWA	2 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 2017)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m ³	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.10 mg/m ³	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Trade Secret	TWA	1 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Trade Secret	TWA	1 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Trade Secret	TWA	1 ppm 4.2 mg/m ³	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
2-Butoxyethanol (Glycol ether) (Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)	200 mg/g (Creatinine in urine)	ACGIH BEI (03 2013)

**Appropriate Engineering
Controls**

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information:	Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Eye/face protection:	Wear safety glasses with side shields (or goggles).
Skin Protection	
Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory Protection:	In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.
Hygiene measures:	Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Gray
Odor:	Mild pungent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	> 260 °C > 500 °F
Flash Point:	> 93 °C > 200 °F (Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	1.4 % (V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and

	in the bottom of containers.
Relative density:	1.075
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Strong acids.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation. May cause an allergic skin reaction.
Eye contact:	Causes serious eye irritation.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: ATEmix: 100,200.61 mg/kg

Dermal

Product: ATEmix: 29,100.62 mg/kg

Inhalation

Product:

Specified substance(s):

Clay LC 50 (Rat): > 20 mg/l

2-Butoxyethanol (Glycol ether) LC 50 (Rat): 2.2 mg/l

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

2-Butoxyethanol (Glycol ether) in vivo (Rabbit): Irritating Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

2-Butoxyethanol (Glycol ether) Rabbit, 24 - 72 hrs: Irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline Silica (Quartz)/ Silica Sand Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity

Product: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Bisphenol A LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 3.6 - 5.4 mg/l Mortality

Trade Secret LC 50 (Guppy (*Poecilia reticulata*), 96 h): 1,014 mg/l Mortality

2-Butoxyethanol (Glycol ether) LC 50 (*Oncorhynchus mykiss*, 96 h): 1,464 mg/l

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

Bisphenol A EC 50 (Water flea (*Daphnia magna*), 48 h): 9.2 - 11.4 mg/l Intoxication

2-Butoxyethanol (Glycol ether) EC 50 (*Daphnia magna*, 48 h): 1,800 mg/l

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

2-Butoxyethanol (Glycol ether) NOAEL (*Danio rerio*, 21 d): > 100 mg/l Experimental result, Key study

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

2-Butoxyethanol (Glycol ether) NOEC (*Daphnia magna*, 21 d): 100 mg/l

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Bisphenol A Log Kow: 3.32

Tetraethylene pentamine Log Kow: 1.503

2-Butoxyethanol (Glycol ether) Log Kow: 0.83

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

UN1760, CORROSIVE LIQUID, N.O.S. (Diethylenetriamine), 8, PG III

CFR / DOT:

UN1760, Corrosive liquids, n.o.s. (Diethylenetriamine), 8, PG III

IMDG:

UN1760, CORROSIVE LIQUID, N.O.S. (Diethylenetriamine), 8, PG III

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Dibutyl phthalate	10 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Bisphenol A	
Naphthalenesulfonic acid (Zinc compound)	
2-Butoxyethanol (Glycol ether)	
Dibutyl phthalate	10 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Clay	10000 lbs
Crystalline Silica (Quartz)/ Silica Sand	10000 lbs
Bisphenol A	10000 lbs
Tetraethylene pentamine	10000 lbs
Trade Secret	10000 lbs
2-Butoxyethanol (Glycol ether)	10000 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
Bisphenol A

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65



WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov



US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand
Bisphenol A
Tetraethylene pentamine
2-Butoxyethanol (Glycol ether)

US. Massachusetts RTK - Substance List

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand
Bisphenol A
Tetraethylene pentamine

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand
Bisphenol A
Tetraethylene pentamine

US. Rhode Island RTK

Chemical Identity

Clay
Crystalline Silica (Quartz)/ Silica Sand

International regulations

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

VOC: When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
0 g/l

Regulatory VOC (less water and exempt solvent) : 2 g/l

VOC Method 310 : 0.14 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision
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Revision Date:	12/10/2018
Version #:	2.0
Further Information:	No data available.

Disclaimer:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

