

# SAFETY DATA SHEET

## 1. Identification

**Material name:** Vulkem® 801  
**Material:** 891712A 805

### Recommended use and restriction on use

**Recommended use:** Coatings  
**Restrictions on use:** Not known.

### Manufacturer/Importer/Supplier/Distributor Information

Tremco Canadian Sealants  
220 Wicksteed Ave  
Toronto ON M4H 1G7  
CA

**Contact person:** EH&S Department  
**Telephone:** 1-800-263-6046  
**Emergency telephone number:** 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

Acute toxicity (Inhalation - dust and mist)	Category 4
Respiratory sensitizer	Category 1
Skin sensitizer	Category 1
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1A

#### Unknown toxicity - Health

Acute toxicity, oral	45.85 %
Acute toxicity, dermal	53.22 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	96.48 %

### Environmental Hazards

Acute hazards to the aquatic environment	Category 2
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#### Unknown toxicity - Environment

Acute hazards to the aquatic environment	92.94 %
Chronic hazards to the aquatic environment	100 %

## Label Elements

### Hazard Symbol:



**Signal Word:** Danger

**Hazard Statement:** Harmful if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause genetic defects.  
May cause cancer.  
Toxic to aquatic life.

### Precautionary Statements

**Prevention:** Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. [In case of inadequate ventilation] wear respiratory protection. 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 INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER/doctor if you feel unwell. 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 (%)*
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Calcium Carbonate (Limestone)	1317-65-3	30 - 60%
Titanium dioxide	13463-67-7	3 - 7%
Aluminum	7429-90-5	1 - 5%
Calcium oxide	1305-78-8	1 - 5%
Hydrotreated heavy naphtha	64742-48-9	1 - 5%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	0.1 - 1%
4,4'-Methylene bis(phenylisocyanate)	101-68-8	0.1 - 1%
Hydrotreated heavy naphthenic distillate	64742-52-5	0.1 - 1%
Dibutyl tin dilaurate	77-58-7	0.1 - 1%
Tosyl isocyanate	4083-64-1	0.1 - 1%
Amorphous silica	7631-86-9	0.1 - 1%
Polymethylene polyphenyl isocyanate	9016-87-9	0.1 - 1%
Aluminum hydroxide	21645-51-2	0.1 - 1%
2,4-Toluene diisocyanate	584-84-9	0.1 - 1%
Aluminum oxide	1344-28-1	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:** Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
- 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:** May cause skin and eye irritation.

#### Indication of immediate medical attention and special treatment needed

**Treatment:** Symptoms may be delayed.

#### 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:** Ventilate closed spaces before entering them. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep upwind. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**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:** Avoid release to the environment. 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. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. 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
Calcium Carbonate (Limestone) - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium Carbonate (Limestone) - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Titanium dioxide	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Titanium dioxide - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Titanium dioxide - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Titanium dioxide - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Titanium dioxide - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Titanium dioxide - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Aluminum - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2011)
Aluminum - Total dust. - as Al	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum - Respirable fraction. - as Al	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
Aluminum - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Aluminum - Total dust.	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Calcium oxide	TWA	2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.05 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
	OSHA_ACT	0.025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	PEL	0.05 mg/m3	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/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceiling	0.02 ppm 0.2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Hydrotreated heavy naphthenic distillate - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Hydrotreated heavy	PEL	500 ppm 2,000 mg/m3	US. OSHA Table Z-1 Limits for Air

naphthenic distillate			Contaminants (29 CFR 1910.1000) (02 2006)
Hydrotreated heavy naphthenic distillate - Mist.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Dibutyl tin dilaurate - as Sn	STEL	0.2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	TWA	0.1 mg/m3	US. ACGIH Threshold Limit Values (2011)
	PEL	0.1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Amorphous silica	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Aluminum hydroxide - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2011)
	TWA	5 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Aluminum hydroxide - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Aluminum hydroxide - Respirable fraction.	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
2,4-Toluene diisocyanate - Inhalable fraction and vapor.	STEL	0.005 ppm	US. ACGIH Threshold Limit Values (03 2016)
	TWA	0.001 ppm	US. ACGIH Threshold Limit Values (03 2016)
2,4-Toluene diisocyanate	Ceiling	0.02 ppm 0.14 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum oxide - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2011)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Aluminum oxide - Total dust.	PEL	15 mg/m3	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)
Aluminum oxide - 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/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)
Aluminum oxide - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)

Chemical name	Type	Exposure Limit Values	Source
Calcium Carbonate (Limestone) - Total dust.	STEL	20 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Calcium Carbonate (Limestone) - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium Carbonate (Limestone) - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium dioxide	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium dioxide - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Aluminum - Respirable.	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Aluminum - Respirable fraction.	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Aluminum	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Aluminum - as Al	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Aluminum - Welding fume. - as Al	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Calcium oxide	TWA	2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium oxide	TWA	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium oxide	TWA	2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Hydrotreated heavy naphtha	TWA	525 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	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/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
4,4'-Methylene bis(phenylisocyanate)	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)



4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
	CEV	0.02 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
4,4'-Methylene bis(phenylisocyanate)	TWA	0.005 ppm 0.051 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Hydrotreated heavy naphthenic distillate - Mist.	TWA	0.2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Hydrotreated heavy naphthenic distillate - Inhalable fraction.	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Hydrotreated heavy naphthenic distillate - Mist.	STEL	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Polymethylene polyphenyl isocyanate	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
2,4-Toluene diisocyanate	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
2,4-Toluene diisocyanate	TWA	0.005 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
	CEV	0.02 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
2,4-Toluene diisocyanate	TWA	0.005 ppm 0.036 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	STEL	0.02 ppm 0.14 mg/m3	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
2,4-Toluene diisocyanate (Toluene diamine (sum of 2,4- and 2,6-isomers), with hydrolysis: Sampling time: End of shift.)	5 µg/g (Creatinine in urine)	ACGIH BEI (03 2016)



**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:**      Use personal protective equipment as required.

**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:**      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. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**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 petroleum/solvent

**Odor threshold:**      No data available.

**pH:**      No data available.

**Melting point/freezing point:**      No data available.

**Initial boiling point and boiling range:**      No data available.

**Flash Point:**      > 100 °C > 212 °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 (%):**      No data available.

**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

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	in the bottom of containers.
<b>Relative density:</b>	1.39
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Practically Insoluble
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

**10. Stability and reactivity**

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

**11. Toxicological information****Information on likely routes of exposure**

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

**Symptoms related to the physical, chemical and toxicological characteristics**

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

**Information on toxicological effects**

**Acute toxicity (list all possible routes of exposure)**

**Oral**

**Product:** ATEmix: 28,164.11 mg/kg

**Dermal**

**Product:** ATEmix: 38,743.66 mg/kg

**Inhalation**

**Product:** ATEmix: 2.73 mg/l

**Repeated dose toxicity**

**Product:** No data available.

**Skin Corrosion/Irritation**

**Product:** No data available.

**Specified substance(s):**

Titanium dioxide	in vivo (Rabbit): Not irritant Experimental result, Supporting study
Aluminum	in vivo (Rabbit): Not classified as an Irritant Read-across from supporting substance (structural analogue or surrogate), Supporting study
Calcium oxide	in vivo (Rabbit): Irritating Read-across from supporting substance (structural analogue or surrogate), Key study
Hydrotreated heavy naphtha	in vivo (Rabbit): Study design not appropriate to classify skin irritation. Experimental result, Supporting study
4,4'-Methylene bis(phenylisocyanate)	in vivo (Rabbit): Irritating Read-across based on grouping of substances (category approach), Key study
Hydrotreated heavy naphthenic distillate	in vivo (Rabbit): Not irritant Experimental result, Key study
Dibutyl tin dilaurate	In vitro (Human, in vitro reconstituted epidermis model): Not irritant Experimental result, Supporting study
Amorphous silica	in vivo (Rabbit): Not irritant Experimental result, Key study
Aluminum hydroxide	in vivo (Rabbit): Not classified as an Irritant Experimental result, Key study
2,4-Toluene diisocyanate	in vivo (Rabbit): Moderately irritating Experimental result, Supporting study
Aluminum oxide	in vivo (Rabbit): Not irritant Experimental result, Key study

**Serious Eye Damage/Eye Irritation**

**Product:** No data available.

**Specified substance(s):**

Titanium dioxide	Rabbit, 24 hrs: Not irritating
Aluminum	Rabbit, 24 hrs: Not irritating
Hydrotreated heavy naphtha	Rabbit, 24 - 72 hrs: Not irritating
Hydrotreated heavy naphthenic distillate	Rabbit, 24 hrs: Not irritating
Dibutyl tin dilaurate	Rabbit, 24 hrs: Highly irritating
Amorphous silica	Rabbit, 24 hrs: Not irritating
Aluminum hydroxide	Rabbit, 24 hrs: Not irritating
2,4-Toluene diisocyanate	Rabbit, 24 - 72 hrs: Category 2

Aluminum oxide                      Rabbit, 24 hrs: Not irritating

**Respiratory or Skin Sensitization**

**Product:**                              May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause sensitization by inhalation.

**Carcinogenicity**

**Product:**                              No data available.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Titanium dioxide                      Overall evaluation: Possibly carcinogenic to humans.

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

Hydrotreated heavy                      Overall evaluation: Not classifiable as to carcinogenicity to humans. Overall  
naphthenic distillate                      evaluation: Carcinogenic to humans.

2,4-Toluene                              Overall evaluation: Possibly carcinogenic to humans.  
diisocyanate

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

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

Hydrotreated heavy                      Known To Be Human Carcinogen.  
naphthenic distillate

2,4-Toluene                              Reasonably Anticipated to be a Human Carcinogen.  
diisocyanate

**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.

<b>12. Ecological information</b>
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**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

Aluminum LC 50 (Rainbow trout, donaldson trout (*Oncorhynchus mykiss*), 96 h): 0.12 mg/l Mortality

Dibutyl tin dilaurate LC 50 (Ide, silver or golden orfe (*Leuciscus idus*), 48 h): 2 mg/l Mortality

2,4-Toluene diisocyanate LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 108.8 - 240.4 mg/l Mortality

**Aquatic Invertebrates**

**Product:** No data available.

**Specified substance(s):**

Titanium dioxide EC 50 (Water flea (*Daphnia magna*), 48 h): > 1,000 mg/l Intoxication

Dibutyl tin dilaurate EC 50 (Water flea (*Daphnia magna*), 24 h): 0.66 mg/l Intoxication

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

Hydrotreated heavy naphtha LL 50 (*Pimephales promelas*, 14 d): 5.2 mg/l Experimental result, Supporting study  
 NOAEL (*Pimephales promelas*, 14 d): 2.6 mg/l Experimental result, Supporting study  
 NOAEL (*Daphnia magna*, 21 d): 2.6 mg/l Other, Key study  
 EC 50 (*Daphnia magna*, 21 d): 10 mg/l Other, Key study

Hydrotreated heavy naphthenic distillate NOAEL (*Oncorhynchus mykiss*, 14 d):  $\geq$  1,000 mg/l QSAR QSAR, Supporting study

**Aquatic Invertebrates**

**Product:** No data available.

**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):**

Aluminum Brook trout (*Salvelinus fontinalis*), Bioconcentration Factor (BCF): 36 (Flow through)

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Specified substance(s):**

Dibutyl tin dilaurate Log Kow: 3.12

**Mobility in soil:** No data available.

**Other adverse effects:** Toxic to aquatic organisms.

**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)**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2,4-Toluene diisocyanate	De minimis concentration: TSCA 5(a)(2)% One-Time Export Notification only.

**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>
4,4'-Methylene bis(phenylisocyanate)	5000 lbs.
2,4-Toluene diisocyanate	100 lbs.
Toluene-2,6-Diisocyanate	100 lbs.
Methanol	5000 lbs.
Chlorobenzene	100 lbs.
Propylene oxide	100 lbs.
Ethylbenzene	1000 lbs.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**

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

**SARA 302 Extremely Hazardous Substance**

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
2,4-Toluene diisocyanate	100 lbs.	500 lbs.
Toluene-2,6-Diisocyanate	100 lbs.	100 lbs.
Propylene oxide	100 lbs.	10000 lbs.

**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
4,4'-Methylene bis(phenylisocyanate) Polymethylene polyphenyl isocyanate	5000 lbs.
2,4-Toluene diisocyanate	100 lbs.
Toluene-2,6-Diisocyanate	100 lbs.
Methanol	5000 lbs.
Chlorobenzene	100 lbs.
Propylene oxide	100 lbs.
Ethylbenzene	1000 lbs.

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
2,4-Toluene diisocyanate	500lbs
Toluene-2,6-Diisocyanate	100lbs
Propylene oxide	500lbs
Calcium Carbonate (Limestone)	10000 lbs
Titanium dioxide	10000 lbs
Aluminum	10000 lbs
Calcium oxide	10000 lbs
Hydrotreated heavy naphtha	10000 lbs
Crystalline Silica (Quartz)/ Silica Sand	10000 lbs
4,4'-Methylene bis(phenylisocyanate)	10000 lbs
Hydrotreated heavy naphthenic distillate	10000 lbs
Dibutyl tin dilaurate	10000 lbs
Tosyl isocyanate	10000 lbs
Amorphous silica	10000 lbs
Polymethylene polyphenyl isocyanate	10000 lbs
Aluminum hydroxide	10000 lbs
Aluminum oxide	10000 lbs

**SARA 313 (TRI Reporting)**

<u>Chemical Identity</u>
Aluminum
2,4-Toluene diisocyanate

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

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2,4-Toluene diisocyanate	lbs
Toluene-2,6-Diisocyanate	lbs
Propylene oxide	lbs

**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](http://www.P65Warnings.ca.gov)

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

### Chemical Identity

Calcium Carbonate (Limestone)  
Titanium dioxide  
Aluminum  
Calcium oxide  
Crystalline Silica (Quartz)/ Silica Sand  
Hydrotreated heavy naphthenic distillate  
2,4-Toluene diisocyanate

## US. Massachusetts RTK - Substance List

### Chemical Identity

Calcium Carbonate (Limestone)  
Titanium dioxide  
Aluminum  
Calcium oxide  
Crystalline Silica (Quartz)/ Silica Sand  
2,4-Toluene diisocyanate  
Toluene-2,6-Diisocyanate  
Propylene oxide

## US. Pennsylvania RTK - Hazardous Substances

### Chemical Identity

Calcium Carbonate (Limestone)  
Titanium dioxide  
Aluminum  
Calcium oxide  
Hydrotreated heavy naphtha  
2,4-Toluene diisocyanate

## US. Rhode Island RTK

### Chemical Identity

Calcium Carbonate (Limestone)  
Titanium dioxide  
Aluminum  
Calcium oxide

## International regulations

### Montreal protocol

Not applicable

### Stockholm convention

Not applicable

### Rotterdam convention

Not applicable

**Kyoto protocol**  
Not applicable

**VOC:**  
Regulatory VOC (less water and  
exempt solvent) : 21 g/l  
VOC Method 310 : 1.50 %

**Inventory Status:**

Australia AICS:	One or more components in this product are not 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.
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.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.

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<b>16. Other information, including date of preparation or last revision</b>
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**Revision Date:** 07/21/2018

**Version #:** 1.1

**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.