

SAFETY DATA SHEET

1. Identification

Material name: Vulkem® 951 NF
Material: 871712 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

| | |
|------------------------|------------|
| Respiratory sensitizer | Category 1 |
| Skin sensitizer | Category 1 |
| Carcinogenicity | Category 2 |

Unknown toxicity - Health

| | |
|------------------------------------------|---------|
| Acute toxicity, oral | 0.63 % |
| Acute toxicity, dermal | 9.28 % |
| Acute toxicity, inhalation, vapor | 100 % |
| Acute toxicity, inhalation, dust or mist | 99.55 % |

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing cancer.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. [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: If breathing is difficult, 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. 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 (%)* |
|-------------------------|------------|-------------------------|
| Titanium dioxide | 13463-67-7 | 7 - 13% |
| Amorphous silica | 7631-86-9 | 0.5 - 1.5% |
| Isophorone Diisocyanate | 4098-71-9 | 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: Rinse mouth thoroughly.

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: 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: Rinse immediately with plenty of water.

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. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

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 |
|-----------------------------------------|------|------------------------------------------------|-----------------------------------------------------------------------------|
| Titanium dioxide | TWA | 10 mg/m ³ | US. ACGIH Threshold Limit Values (2011) |
| Titanium dioxide - Total dust. | PEL | 15 mg/m ³ | 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/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Titanium dioxide - Respirable fraction. | TWA | 5 mg/m ³ | 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) |
| 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/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000) (2000) |
| Isophorone Diisocyanate | TWA | 0.005 ppm | US. ACGIH Threshold Limit Values (2011) |
| Aluminum oxide - Respirable fraction. | TWA | 1 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) |
| Aluminum oxide - 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) |
| 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/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |
| Aluminum oxide - Total dust. | TWA | 15 mg/m ³ | US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016) |

| Chemical name | Type | Exposure Limit Values | Source |
|-----------------------------------------|---------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Titanium dioxide - Total dust. | TWA | 10 mg/m ³ | 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/m ³ | 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/m ³ | Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010) |
| Titanium dioxide - Total dust. | TWA | 10 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |
| Isophorone Diisocyanate | 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) |
| Isophorone 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) |
| Isophorone Diisocyanate | TWA | 0.005 ppm 0.045 mg/m ³ | Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017) |

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.

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| 9. Physical and chemical properties |
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Appearance

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|--------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 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: | > 93 °C > 200 °F(Pensky-Martens 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 in the bottom of containers. |
| Relative density: | 1.102 |
| Solubility(ies) | |
| Solubility in water: | Practically Insoluble |
| 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. |

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| 10. Stability and reactivity |
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|--------------------------------------------|-------------------------------------------------------------------------------------------------|
| 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: | Alcohols. Amines. Strong acids. Strong bases. Water, moisture. |
| 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: | May cause an allergic skin reaction. |
| Eye contact: | Eye contact is possible and should be avoided. |
| 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: 23,984.77 mg/kg |
| Dermal | |
| Product: | ATEmix: 14,990.48 mg/kg |
| Inhalation | |
| Product: | Not classified for acute toxicity based on available data. |
| Specified substance(s): | |
| Titanium dioxide | LC 50 (Rat): 3.43 mg/l |
| Amorphous silica | LC 50 (Rat): > 2.08 mg/l |
| Isophorone Diisocyanate | LC 50 (Rat): 135 - 160 mg/m ³ |
| Aluminum oxide | LC 50 (Rat): 7.6 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 |
| Amorphous silica | in vivo (Rabbit): Not irritant | Experimental result, Key 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 |
| Amorphous silica | Rabbit, 24 hrs: Not irritating |
| 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:** Suspected of causing cancer.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Titanium dioxide Overall evaluation: Possibly carcinogenic to humans.

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

No carcinogenic components identified

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.

Aquatic Invertebrates
Product: No data available.

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

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

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.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

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> |
|--------------------------|----------------------------|
| Propylene oxide | 100 lbs. |
| Ethylbenzene | 1000 lbs. |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

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

SARA 302 Extremely Hazardous Substance

| <u>Chemical Identity</u> | <u>Reportable quantity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------|----------------------------|------------------------------------|
| Isophorone Diisocyanate | 500 lbs. | 500 lbs. |
| Propylene oxide | 100 lbs. | 10000 lbs. |

SARA 304 Emergency Release Notification

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| Isophorone Diisocyanate | |
| Propylene oxide | 100 lbs. |
| Ethylbenzene | 1000 lbs. |

SARA 311/312 Hazardous Chemical

| <u>Chemical Identity</u> | <u>Threshold Planning Quantity</u> |
|--------------------------|------------------------------------|
| Isophorone Diisocyanate | 500lbs |
| Propylene oxide | 500lbs |
| Titanium dioxide | 10000 lbs |
| Amorphous silica | 10000 lbs |
| Aluminum oxide | 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)

| <u>Chemical Identity</u> | <u>Reportable quantity</u> |
|--------------------------|----------------------------|
| 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 - www.P65Warnings.ca.gov

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

| <u>Chemical Identity</u> |
|--------------------------|
| Titanium dioxide |

US. Massachusetts RTK - Substance List**Chemical Identity**

Titanium dioxide
Isophorone Diisocyanate
Propylene oxide

US. Pennsylvania RTK - Hazardous Substances**Chemical Identity**

Titanium dioxide

US. Rhode Island RTK**Chemical Identity**

Titanium dioxide

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) : 187 g/l

VOC Method 310 : 16.98 %

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: | 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. |

16. Other information, including date of preparation or last revision

| | |
|-----------------------------|--------------------|
| 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.