# SAFETY DATA SHEET

## 1. Identification

<table>
<thead>
<tr>
<th>Material name:</th>
<th>Vertigrip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material:</td>
<td>833GRYS312</td>
</tr>
</tbody>
</table>

**Recommended use and restriction on use**

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

### Manufacturer/Importer/Supplier/Distributor Information

Chemtron International, Inc.  
8428 Shepard Road SE  
Calgary AB T2C 1R6 CA  

**Contact person**: EH&S Department  
**Telephone**: 1-866-303-3103  
**Emergency telephone number**: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

## 2. Hazard(s) identification

### Hazard Classification

**Health Hazards**

<table>
<thead>
<tr>
<th>Carcinogenicity</th>
<th>Category 2</th>
</tr>
</thead>
</table>

**Unknown toxicity - Health**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity, oral</td>
<td>55.28 %</td>
</tr>
<tr>
<td>Acute toxicity, dermal</td>
<td>59.34 %</td>
</tr>
<tr>
<td>Acute toxicity, inhalation, vapor</td>
<td>99.99 %</td>
</tr>
<tr>
<td>Acute toxicity, inhalation, dust or mist</td>
<td>100 %</td>
</tr>
</tbody>
</table>

### Label Elements

**Hazard Symbol:**

![Hazard Symbol]

**Signal Word**: Warning  
**Hazard Statement**: Suspected of causing cancer.
Prevention: 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 exposed or concerned: Get medical advice/attention.

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

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS number</th>
<th>Content in percent (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>471-34-1</td>
<td>20 - &lt;50%</td>
</tr>
<tr>
<td>3-Aminopropyltrimethoxysilane</td>
<td>13822-56-5</td>
<td>1 - &lt;5%</td>
</tr>
<tr>
<td>Vinyltrimethoxysilane</td>
<td>2768-02-7</td>
<td>1 - &lt;5%</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
<td>1 - &lt;5%</td>
</tr>
</tbody>
</table>

* 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 CENTRE/doctor/ if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/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:**
No data available.

**Methods and material for containment and cleaning up:**
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:**
Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

**Conditions for safe storage, including any incompatibilities:**
Store locked up.

8. Exposure controls/personal protection

**Control Parameters**

**Occupational Exposure Limits**
### Chemical Identity

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Calcium carbonate - Respirable fraction.</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>15 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>15 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Titanium dioxide - Respirable fraction.</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>50 millions of particles per cubic foot of air</td>
<td>US. OSHA Table Z-3 (29 CFR 1910.1000) (03 2016)</td>
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</table>

### Chemical name

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<th>Type</th>
<th>Exposure Limit Values</th>
<th>Source</th>
</tr>
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<tr>
<td>Calcium carbonate - Total dust.</td>
<td>STEL</td>
<td>20 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Calcium carbonate - Respirable fraction.</td>
<td>TWA</td>
<td>3 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
</tr>
<tr>
<td>Calcium carbonate - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)</td>
</tr>
<tr>
<td>Vinyltrimethoxysilane</td>
<td>STEL</td>
<td>10 ppm</td>
<td>Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)</td>
</tr>
<tr>
<td>Titanium dioxide - Total dust.</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)</td>
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### Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.
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 safety glasses with side shields (or goggles).

**Skin Protection**
- **Hand Protection:** Use suitable protective gloves if risk of skin contact.
- **Other:** Wear suitable protective clothing.

**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.

### 9. Physical and chemical properties

**Appearance**
- Physical state: solid
- Form: Paste
- Color: Grey
- Odor: Characteristic
- 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: > 151 °C > 304 °F
- 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:** 1.47

**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: Alcohols. Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). 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 be harmful in contact with skin. Causes mild skin irritation.
Eye contact: Eye contact is possible and should be avoided.
Ingestion: May be harmful if swallowed.

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: 4,472.5 mg/kg
Dermal Product: ATEmix: 2,006.17 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

**Repeated dose toxicity**
- **Product:** No data available.

**Skin Corrosion/Irritation**
- **Product:** No data available.

**Specified substance(s):**
- Calcium carbonate
  - in vivo (Rabbit): Not irritant  Experimental result, Key study
- 3-Aminopropyltrimethoxy silane
  - in vivo (Rabbit): Irritating  Experimental result, Key study
- Vinyltrimethoxysilane
  - in vivo (Rabbit): Not irritant  Experimental result, Key study
- Titanium dioxide
  - in vivo (Rabbit): Not irritant  Experimental result, Supporting study

**Serious Eye Damage/Eye Irritation**
- **Product:** No data available.

**Specified substance(s):**
- Calcium carbonate
  - Rabbit, 24 - 72 hrs: Not irritating
- 3-Aminopropyltrimethoxy silane
  - Rabbit, 24 - 72 hrs: Highly irritating
- Vinyltrimethoxysilane
  - Rabbit: Not irritating
- Titanium dioxide
  - Rabbit, 24 hrs: Not irritating

**Respiratory or Skin Sensitization**
- **Product:** No data available.

**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

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
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):

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>5000 lbs.</td>
</tr>
</tbody>
</table>

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Reportable quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>5000 lbs.</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous Chemical

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>Threshold Planning Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>3-</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Aminopropyltrimethoxysilane</td>
<td></td>
</tr>
<tr>
<td>Vinyltrimethoxysilane</td>
<td>10000 lbs</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10000 lbs</td>
</tr>
</tbody>
</table>

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
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.
- Titanium dioxide: Carcinogenic. 09 2011
- Crystalline Silica (Quartz)/Silica Sand: Carcinogenic. 09 2011
- Silica Sand: Developmental toxin. 03 2012

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

Chemical Identity
- Calcium carbonate
- Titanium dioxide

US. Massachusetts RTK - Substance List

Chemical Identity
- Calcium carbonate
- Crystalline Silica (Quartz)/Silica Sand

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
- Calcium carbonate

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:
- Regulatory VOC (less water and exempt solvent): 0 g/l
- VOC Method 310: 0.01 %
### Inventory Status:

<table>
<thead>
<tr>
<th>Region/Inventory List</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia AICS:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Canada DSL Inventory List:</td>
<td>All components in this product are listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>EINECS, ELINCS or NLP:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Japan (ENCS) List:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>China Inv. Existing Chemical Substances:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Korea Existing Chemicals Inv. (KECI):</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Canada NDSL Inventory:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Philippines PICCS:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>US TSCA Inventory:</td>
<td>All components in this product are listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>New Zealand Inventory of Chemicals:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Japan ISHL Listing:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Japan Pharmacopoeia Listing:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Mexico INSQ:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Ontario Inventory:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
<tr>
<td>Taiwan Chemical Substance Inventory:</td>
<td>One or more components in this product are not listed on or exempt from the Inventory.</td>
</tr>
</tbody>
</table>
16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Revision Date:</th>
<th>08/04/2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version #:</td>
<td>1.0</td>
</tr>
<tr>
<td>Further Information:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Disclaimer:</td>
<td>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.</td>
</tr>
</tbody>
</table>