

SAFETY DATA SHEET



Section 1. Identification

Product Name: Vertical Mender™ (Aggregate)

VersaFlex Incorporated

686 S. Adams Street

Kansas City, KS 66105

913.321.9000

Spill, leak, fire, exposure, or accident, call

CHEMTREC day or night

Domestic North America **800.424.9300**

International **703.527.3887**

e-mail: ehs@versaflex.com

Section 2. Hazards Identification

Emergency Overview: High airborne levels of dust may cause irritation to eyes and upper respiratory tract.

GHS Ratings:

Inhalation Toxicity	Acute Tox. 4	Gases>2500+<=5000ppm, Vapors>10+<=20mg/l, Dusts&mists>1+<=5mg/l
Carcinogen	1A	Known Human Carcinogen Based on human evidence
Organ toxin repeated exposure	1	Significant toxicity in humans- Reliable, good quality human case studies or epidemiological studies Presumed significant toxicity in humans- Animal studies with significant and/or severe toxic effects relevant to humans at generally low exposure (guidanc

GHS Hazards

H332	Harmful if inhaled
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

GHS Precautions

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P261	Avoid breathing dust/fume/gas/mist/vapours/spray
P264	Wash exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P281	Use personal protective equipment as required
P312	Call a POISON CENTER or doctor/physician if you feel unwell

P314	Get Medical advice/attention if you feel unwell
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P308+P313	IF exposed or concerned: Get medical advice/attention
P405	Store locked up
P501	Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Danger



Acute Health Effects:

Excessive exposure to high concentrations of dust may cause irritation to the eyes, skin and mucous membranes of the upper respiratory tracts.

Inhalation: Can irritate respiratory system. Avoid breathing dust.

Eye: Dusts may cause irritation to the eye. Scratching of cornea can occur if eye is rubbed.

Ingestion: Ingestion of harmful amounts of this product as distributed is unlikely due to its solid insoluble form. Ingestion of excessive amounts of dust may cause nausea and vomiting.

Chronic Health Effects: Chronic inhalation of respirable crystalline silica may cause silicosis; a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. Crystalline silica inhaled from occupational sources is classified as carcinogenic to humans.

Section 3. Composites/Information on Ingredients

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Quartz 14808-60-7 80 to 90%	PELs - (30)/(%SiO ₂ + 2) mg/m ³ TWA, total dust PELs - (250)/(%SiO ₂ + 5) mppcf TWA, respirable fraction PELs - (10)/(%SiO ₂ + 2) mg/m ³ TWA, respirable fraction	TLV - 0.025 mg/m ³ TWA (respirable fraction)	
Glass, oxide, chemicals 65997-17-3 10 to 20%	OELs not established	OELs not established	

Section 4. First-aid Measures

Move exposed person to fresh air. If breathing is labored, oxygen should be administered by qualified personnel. Consult a physician if necessary.

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

After contact with skin, wash soap and water. If irritation persists, consult a physician.
 Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water. Dilute by drinking large quantities of water. Get medical attention if discomfort persists.

Section 5. Fire-fighting Measures

This material is not flammable, combustible or explosive.

Section 6. Accidental Release Measures

Clean up using dustless methods to minimize generation and distribution of respirable particles.
 Avoid using compressed air. Avoid material entering sewers, drains or surface waters.

Section 7. Handling and Storage

Put on appropriate personal protective equipment (see Section 8).

Handle the product in accordance with good industrial hygiene and safety practices. Do not breathe dust. Use proper work practices and adequate ventilation with dust collection to maintain airborne levels of crystalline silica to below PEL. Wear appropriate respirator when ventilation is inadequate. Material is to be stored in accordance with local regulations. Store in original container protected from moisture, keeping material in a dry and well-ventilated area. Keep container tightly closed and sealed until ready for use.

Do not store in unlabeled containers.

Use appropriate containment to avoid environmental contamination.

Section 8. Exposure Controls/Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Quartz 14808-60-7	PELs - (30)/(%SiO ₂ + 2) mg/m ³ TWA, total dust PELs - (250)/(%SiO ₂ + 5) mppcf TWA, respirable fraction PELs - (10)/(%SiO ₂ + 2) mg/m ³ TWA, respirable fraction	TLV - 0.025 mg/m ³ TWA (respirable fraction)	
Glass, oxide, chemicals 65997-17-3	OELs not established	OELs not established	

Engineering Controls: Use adequate ventilation to reduce the level of respirable crystalline silica to below the PEL.

Ventilation: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Protective Gear: In case of inadequate ventilation, wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Good personal hygiene practices should be followed to include cleansing of exposed skin with soap and water and laundering work clothing.

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 9. Physical and Chemical Properties

<p>Appearance: As color specified</p> <p>Vapor Pressure: No Data</p> <p>pH: No Data</p> <p>Freezing point: No Data</p> <p>Evaporation rate: No Data</p> <p>Explosive Limits: No Data</p> <p>Vapor Density: No Data</p> <p>Solubility: No Data</p> <p>Boiling range: No Data</p> <p>Decomposition temperature: No Data</p> <p>% Weight Volatile (VOC) 0.00</p>	<p>Odor: Not applicable</p> <p>Odor threshold: No Data</p> <p>Melting point: No Data</p> <p>Flash point: Not applicable</p> <p>Flammability: No Data</p> <p>Vapor pressure: No Data</p> <p>Specific Gravity 2.65</p> <p>Partition coefficient (n-octanol/water): No Data</p> <p>Autoignition temperature: No Data</p> <p>Viscosity: N/A</p>
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Section 10. Stability and Reactivity

Chemical Stability: Stable at room temperature. No specific test data related to reactivity is available for this product or its ingredients.

Hazardous reactions: None known. Stable under normal conditions.

Chemical Incompatibility (Materials to Avoid): Contact with powerful oxidizing agents, such as fluorine, chlorine and manganese trioxide may cause fires.

Hazardous Decomposition Products: Crystalline silica will dissolve in hydrofluoric acid and produce a corrosive gas (silicon tetrafluoride).

Section 11. Toxicological Information

Silicosis: The major concern is silicosis, caused by inhalation and retention of respirable crystalline silica dust. Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute.

Chronic or Ordinary Silicosis (often referred to as Simple Silicosis) is the most common form of silicosis and can occur after many years of exposure to relatively low concentrations of airborne respirable crystalline silica dust.

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a shorter period.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, weight loss. Acute silicosis can be fatal.

Autoimmune Diseases: Several studies have reported cases of several autoimmune disorders such as scleroderma, systemic lupus and rheumatoid arthritis among silica exposed workers.

Tuberculosis: Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis.

Kidney Disease: Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers.

Routes of Entry

Inhalation Ingestion

Target Organs

Respiratory System

Effects of Overexposure

Harmful if inhaled

Carcinogenicity

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
14808-60-7	Quartz	80 to 90%	Quartz:

Section 12. Ecological Information

Only component information is listed, if any. No testing has been performed on this mixture as it relates to ecological impact.

Component Ecotoxicity

Section 13. Disposal Considerations

The generation of waste should be avoided or minimized by using excess product in an alternate, beneficial application wherever possible.

Empty containers may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. Transport Information

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	Not Regulated			
IATA	Not Regulated			
IMDG	Not Regulated			

Section 15. Regulatory Information

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.



WHMIS Symbol(s)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30, unless listed below:

- None

This product contains the following substance(s), which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372:

- None

Section 16. Other Information

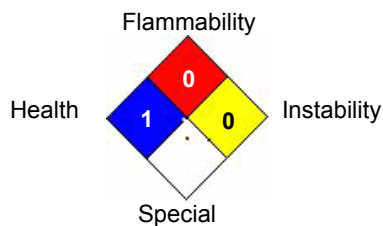
The customer is responsible for determining the proper PPE code for this material within their respective process.

Hazardous Material Information System (HMIS)

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

HMIS & NFPA Hazard Rating
Legend
* = Chronic Health Hazard
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)



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Reviewer Revision 2

Notice to reader:

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PUPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.