MATERIAL SAFETY DATA SHEET

Amorphous Calcium Aluminosilicate – Powder

Section 1a – Identification of Substance

Tradenames: VCAS, VCAS-micronHS, VCAS-8, VCAS-140, VCAS-160, VCAS-micronCT
Product Uses: Pozzolan for cement, mortar, concrete, stucco, faux stone and related products.
Revision Date: April 21, 2008

Section 1b – Company Address

VITRO MINERALS, INC.
832 E. Hightower Trail, PO Box 1169
Social Circle, GA 30025
United States

Phone/Fax Numbers

Emergency Phone Number: 678-990-5652
Technical Information: 678-990-56523
Fax Number: 678-990-2658

Section 2 – Composition and Ingredient Information

Ingredients	Formula	Composition	OSHA PEL	ACGIH TLV
Calcia-Silica-Alumina(1)	$CaO–SiO_2–Al_2O_3$	85% to 95%	Not Listed(2)	Not Listed(2)
Boron Oxide(1)	B_2O_3	0% to 5%		
Sodium and Potassium Oxide(1)	$Na_2O + K_2O$	0% to 2%		
Magnesium Oxide(1)	MgO	0% to 1%		
Titanium Oxide(1)	TiO_2	0% to 1%		

Notes: (1) The amorphous calcium aluminosilicate is a product obtained by the fusion of several inorganic substances mainly calcia, silica, and alumina with lesser amounts of boron oxide and magnesium oxide. The free oxides are not present and are fully combined in the fused silicate. The fused mass is cooled to ambient temperature at a fast rate to prevent crystallization. The subject of this MSDS are fine powder products made by fine grinding of the fused mass. (2) Exposure to this product may be covered by OSHA inert or nuisance dust limits of 15 mg/m^3 for total dust and 5 mg/m^3 for respirable portion. (3) The product may contain less than 1% crystalline calcium aluminosilicate. It does not contain crystalline silica. (4) Where required, the applicable CAS number is 65997-17-3 for a "Glass Oxide."

Section 3 – Physical/Chemical Properties

Specific Gravity (H_2O =1): 2.6
Melting (Softening) Point: >800ºC
Boiling Point: N/A

Evaporation Rate: N/A
Solubility in Water: Insoluble
Water Reactive: Not Reactive

Appearance/Odor: White Powder / No Odor
Vapor Pressure (mm Hg and Temp): N/A
Vapor Density (Air = 1): N/A

N/A = Not Applicable

Section 4 – Fire and Explosion Hazard Data

Fire and Explosion Hazard Overview: This material is considered non-flammable and non-combustible.

Auto-Ignition Temperature: N/A
Flash Point and Method Used: N/A
LEL/UEL: N/A
Unusual Fire and Explosion Hazards: None
Special Fire Fighting Procedures: No special procedures required.
Extinguisher Media: No special media required.

N/A = Not Applicable

Section 5 – Stability and Reactivity

Stability: Stable
Conditions to Avoid: None known.
Hazardous Decomposition Products: Unknown and not suspected.
Hazardous Polymerization: Not known to occur.
Reactivity: When mixed with cement and concrete products in its intended use, the material reacts in the normal way as a "pozzolan" with the lime and alkalis present to form calcium silicate hydrates. Material is considered inert in polymer and resin systems. Avoid contact with strong acids, reducing agents, and oxidizers.

Section 6 – Health Hazard Identification

Emergency Overview: Not considered hazardous. Stable and non-flammable under normal industrial conditions.

Primary Routes of Entry: Inhalation, ingestion, skin absorption.
Signs and Symptoms of Exposure: Eye, skin, or respiratory tract irritation.
Acute: Dust may irritate eyes, skin, respiratory tract, mucous membranes. Dust hazard should not occur under normal use.
Chronic: None known.

Section 7 – Toxicological Information

Carcinogenicity: The following list indicates whether or not the indicated agency has listed the product as a carcinogen:
NTP, Not listed; IARC, Not listed; OSHA, Not listed.
LD50: Oral (g/kg), Not available; Dermal (g/kg), Not available; Inhalation (ppm, 8hrs), Not available.

Section 8 – First Aid Measures

Medical Conditions Generally Aggravated by Exposure: May aggravate existing pulmonary condition if high dust situation is created. Dusting conditions should not occur under normal use.
Eye Contact: Immediately flush eyes with water to remove dust particles. If irritation develops, seek medical attention.
Skin Contact: Wash skin with soap and water. If irritation develops, seek medical attention.
Inhalation: Immediately remove affected person to fresh air. If irritation develops, seek medical attention.
Ingestion: Rinse mouth out with water. Induce vomiting if significant quantities ingested. Seek medical attention.

Section 9 – Exposure Control and Protective Measures

Respiratory Protection: If airborne dust exposure approaches the TLV or PEL (Section 2) use half-mask or full-face air purifying respirator equipped with NIOSH or MSHA-approved high efficiency filters for protection against pneumoconiosis-producing dust. An airline respirator may be required where dust levels are extremely high.
Protective Gloves: Limit contact with skin. Use rubber or cloth gloves as necessary.
Eye Protection: Wear goggles or face shield as appropriate. Avoid contact lenses.
Ventiliation to be Used: Keep dust levels below PEL. Use general and local exhaust ventilation and dust collection systems to keep dust levels within acceptable limits.
Other Protective Clothing and Equipement: None normally required. Wear long sleeves and long pants to reduce skin contact. Use work gloves, goggles and face shield as necessary.
Hygenic Work Practices: Do not allow dust to get into eyes, to be inhaled, to be swallowed, or remain on skin if irritation occurs. Practice good personal hygiene. Wash or shower after use. Launder clothes as normal.

Section 10 – Accidental Release Measures

Steps to be Taken if Material is Accidentally Spilled or Released: Avoid creating airborne dust. Pick up with shovel or mechanical equipment. Wet methods and vacuuming may be used on spills.

Sections 11 & 12 – Disposal and Transportation Considerations

Considered non-hazardous per EPA, RCRA 40CFR, Part 261, 1990. Handle as inert bulk material. Material may be disposed of as a non-hazardous solid waste consistent with state, federal and local disposal regulations. Disposal in a sanitary landfill is usually adequate. Material integrated into a cement/concrete products must be disposed of in accordance with applicable requirements for those products where they exist. Not regulated by the Department of Transportation (DOT).

Section 13 – Handling and Storage

Precautions to be Taken: Keep material dry in storage. No special handling required. Avoid creating airborne dust. Not an electrical conductor.
Other Precautions and/or Special Hazards: None

Section 14 – Ecological Information

Considered to be an inert solid waste, and no special precautions should be taken in case it is released or spilled. These products do not contain, nor are manufactured with, Class I or Class II Ozone-Depleting Chemicals (CFCs) identified in the Clean Air Act Amendment, 1990 List of Ozone Depleting Chemicals.

Section 15 – Additional Regulatory Information

United States: (a) EPA Toxic Substances Control Act (TSCA): The applicable CAS number is 65997-17-3, corresponding to "Glass Oxide." All the raw material components of the glass oxide are in the TSCA Inventory. (b) EPA SARA Title III: Vitro considers these products exempt as they do not meet its health or physical hazards definitions nor contain any SARA 313 chemical ingredients in excess of EPA's de minimus concentrations. (c) OSHA Hazard Communication Standard: Subject to the applicable requirements of this regulation. (d) Right to Know Law: Per this MSDS revision date, these products are not known to contain chemical ingredients listed by the Pennsylvania, New Jersey or Massachusetts Right to Know Law in excess of amounts requiring reporting on such substances' MSDS or labels. (e) California Proposition 65: No ingredient is listed. (f) Clean Air Act: No ingredient is listed
Canada: These products are exempt from Canadian Environmental Protection Act (CEPA) reporting on the Domestic Substances Lists. They are also exempt from Workplace Hazardous Materials Information System (WHMIS) labeling & MSDS requirements.
European Economic Committee (EEC) Labeling Classification: These products do not meet the classification for a "dangerous substance" according to 67/548/EEC and 97/69/EC. The composition has been incorporated in the EINECS under CAS number 65997-17-3 as a glass oxide.
Japan: Chemical Substances Control Law: Exempt from this law.

Section 16 – Other Information

HMIS and NFPA Hazard Rating:

Category	HMIS	NFPA
Acute Health (0-4)	0/1	0/1
Flammability (0-4)	0	0
Reactivity (0-4)	0	0

HMIS Personal Protection: To be supplied by user depending upon use.
NFPA Unusual Hazards: None.

For further technical information on VCAS products contact your Vitro Minerals sales representative or the telephone number listed in Section 1b.

NOTE: Information herein is based on data considered to be accurate as of date prepared. No warranty or representation, express or implied, is made as to the accuracy or completeness of this data and safety information. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.