

VITRAFINE™

AT

SOUTH SHORE SLAG

Safety Data Sheet

SDS I.D. VF-01-28-14

Origin: 1/12/14 Revision Date: 3/05/14 Revision No. 4

Section 1: Product Identification

Product Name: Vitrafine™

Contact Names: T. Church, D. Malecha & B. White

Identified uses of Substance or Mixture: **Granulated Slag for Glass Products**

Vitrafine General Information:

- **Mail Address:** 3411 Sheffield Avenue
Hammond, Indiana 46327
- **Telephone No.:** (219) 888-7171
- **Fax No.:** (219) 881 – 6532
- **E-Mail Address:** Info@Vitrafine.Com

Section 2: Hazards Identification

Potential Acute Health Effects:

Hazard description: Eye & Skin contact; Inhalation and ingestion

Medical conditions aggravated by Exposure: Eye contact with *larger* amounts of dry powder or splashes of wet material may cause effects ranging from moderate eye irritation to chemical burns and blindness.

Response: Exposures require immediate first aid and medical attention to prevent any significant damage to the eye.

Prevention: Safety glasses with side shields.

Carcinogenicity Information (If applicable): Crystalline silica, which is present in GBFS or GGBFS in small amounts, has been listed by IARC and NTP as a known carcinogen (Group I) through inhalation.

NOTE: Hexavalent Chromium is listed by IARC, EPA, NTP and OSHA as Group I known.

Dangers for the Environment: No recognized unusual toxicity to plants or animals.

Response: Proper PPE should be worn at all times to help reduce exposure.

Prevention: Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Section 2: Hazards I.D. (con't)

Storage: Normal temperatures and pressures do not affect the material. Dispose of waste material according to local, state and federal regulations.

Disposal: GBFS or GGBFS is stable, uncontaminated material may be saved for future use. Dispose of bags in a approved landfill or incinerator

NFPA ratings (scale 0-4): Health = 1, Fire = 0, Reactivity = 0

HMIS Classification (scale 0-4): Health = 1, Flammability = 0, Reactivity = 0

Section 3: Composition & Information on Ingredients

Hazardous Components					
Chemical Name (CAS No.)	Identifiers OSHA PEL	% (weight) LD50/LD60 TWA (2002) \		ACGIH TLV-	Comments
Granulated Blast Furnace Slag	65996-69-2	15 mg.m3 (total dust) & 5 mg/m3 (respirable dust)	n/a	10 mg/m3 (Total dust) & 3mg/m3 (respirable dust)	n/a
Amorphous silica	7631-86-9	(80 mg/m3) (% Silica)	n/a	10 mg/m3	n/a
Crystalline Silica (Quartz)*	14808-60-7	10 mg/m3 (respirable dust) /(% silica +2) 30 mg/m3 (total Dust) /(% silica +2) n/a	n/a	0.10 mg/m3 (respirable Quartz)	n/a

(*) = NIOSH REL (8-hour TWA) = 0.05 mg/m3 (respirable quartz)

Section 4: First Aid Measures

Eye Contact: Immediately flush eyes thoroughly with water. Continue Flushing eye for at least (15) fifteen minutes, including under the eye lids to remove any particles. Seek medical attention if symptoms persist.

Section 4: First Aid Measures (con't)

Skin Contact: Wash skin thoroughly with cool flowing water and pH-neutral soap or a mild detergent.

Inhalation of Particles: Remove to fresh air. Seek medical help if coughing or other symptoms do not subside.

NOTE: Inhalation of gross amounts of GBFS or GGBFS requires immediate medical attention.

Ingestion: DO NOT induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Important symptoms, both acute and delayed: n/a

Immediate attention and special treatment needed: n/a

Section 5: Fire-Fighting Measures

Suitable Fire fighting measures: n/a

Unsuitable measures: n/a

Special Hazards/Explosion Awareness: n/a

Firefighter Information: n/a

Section 6: Accidental Release Measures

Personal precautions: Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with the skin. Wear appropriate personal protective (PPE) as described in Section 2, Page One.

Emergency situations: n/a

Environmental precautions: n/a

Containment & Clean-Up: n/a

Section 7: Handling & Storage

Safe Handling procedure: Noted in Sections Two, Four & Six

Safe Storage conditions: Noted in Section 2, Page Two

Potential Ignition sources: n/a

Section 8: Exposure Control/Personal Protection

Exposure Controls:

Engineering Measures: n/a

Protective Equipment: PPE

Respiratory, Eyes/Face, Hands/Fingers, Skin/Body: Noted in Section Four.

Industrial Hygiene Considerations: n/a

Key to Abbreviations

ACGIH = American conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety & Health

OSHA = Occupational Safety and Health Administration

MSHA = Mine Safety and Health Administration

TWA = Time-weighted Averages are based on 8 hour/day & 40 hours weekly exposures

STEL = Short Term Exposure Limits are based on 15 minute exposures

STEV = Short term Exposure Value

Section 9: Physical and Chemical Properties

Information of Physical and Chemical Properties

Material Description			
Physical Form	Solid – Powder	Appearance/Description	Sand like material.
Color	Grey to Light Tan	Odor	NO distinct odor
Taste	n/a	Particulate Type	Granule
Particulate Size	- 3/8"	Aerosol Type	n/a
Odor Threshold	n/a	Physical/Chemical Properties	n/a
General Properties			
Boiling Point	n/a	Melting Point	n/a
Decomposition/Temperature	n/a	Heat of Decomposition	n/a
pH	8.5 to 10.5	Specific gravity/Relative density (H2O=1)	2.5 to 2.9
Water Solubility	n/a	Solvent Solubility	Slightly (0.1 to 1.0%)
Viscosity	n/a	Explosive properties	n/a
Oxidizing Properties	n/a		
Volatility			
Vapor Pressure	n/a	Vapor Density	n/a
Evaporation Rate	n/a	VOC (Wt.)	n/a
VOC (Vol.)	n/a	Volatiles (Wt.)	n/a
Volatiles (Vol.)	n/a		
Flammability			
Flash Point	None – NO Flame	UEL	n/a
LEL	None	Auto Ignition	NONE Combustible

Section 10: Stability and Reactivity Data

Reactivity: n/a

Chemical Stability: Stable

Possibility of Hazardous reactions: Will not spontaneously occur. Adding water produces (caustic) Calcium Hydroxide as a result of hydration.

Conditions to Avoid: Wet GBFS or GGBFS is alkaline. As a result it is compatible with acids, Ammonium salts, and Aluminum metal.

Section 11: Toxicological Information

“This section is non-applicable for this material”.

Section 12: Ecological Information

“This section is non-applicable for this material”.

Section 13: Disposal Considerations

Product and Packaging Waste: See Section Two on Page Two (Disposal)

Section 14: Transport Information

Highway & Rail Shipping: Product and Bi-product (Fines) are not dangerous and/or hazardous under U.S. Department of Transportation (DOT) regulations.

Section 15: Other Regulatory Information

SARA 313 Toxic Chemicals:

No material listed in the components in Section 2 of this SDS is on the SARA 313 listing.

Carcinogenicity categories:

EPA (Environmental Protection Agency)

None of the activities are listed.

Section 15: Other Regulatory (con't)

IARC (International Agency for Research on Cancer)

7631-86-9 Silicon dioxide, chemically prepared = 3.

14808-60-7 Crystalline silica (quartz) = 1.

14464-46-1 Crystalline silica (cristobalite) = 1

NIOSH-Ca (National Institute for Occupational Safety & Health)

14808-60-7 & 14464-46-1 (Same_as above, but no rating)

OSHA-Ca (Occupational Safety & Health Administration)

None of the above ingredients are listed.

Hazard Symbol to be observed:

Toxic = Square box with skull & crossed bones inside.

Section 16: Other Information

Credibility & Responsibility Statement:

“This information on this SDS is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship”.