

## MATERIAL SAFETY DATA SHEET

<b>PRODUCT NAME:</b> <i>Glass Beads</i>	<b>MSDS NO:</b> 365-1	
<b>Chemical Name and Synonyms:</b>	<b>WHMIS CLASS:</b> D-2B	

**SUPPLIER:** Opta Minerals  
 407 Parkside Drive  
 Waterdown, Ontario  
 L0R 2H0

**Telephone:** 905-689-6661  
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### MATERIAL IDENTIFICATION AND USE

*This material is a white, granular material for use as an abrasive blasting media and various other industrial applications. This product is amorphous and contains **no** free crystalline silica. **Note:** This MSDS covers many products and individual physical and chemical properties will vary. Consult individual Technical Data Sheet's for specifics.*

### PHYSICAL DATA

**Appearance and Odour:** Solid, round granules. White to clear colour. No appreciable odour.  
**Solubility in Water:** Insoluble  
**Substances by Weight (%):**

Glass		100.0
Silicon Dioxide	SiO <sub>2</sub>	~70.0
Sodium Oxide	Na <sub>2</sub> O	~13.0
Calcium Oxide	CaO	~ 7.0
Magnesium Oxide	MgO	~ 4.0
Potassium Oxide	K <sub>2</sub> O	~ 3.0
Aluminum Oxide	Al <sub>2</sub> O <sub>3</sub>	~ 1.0

### HAZARDOUS INGREDIENTS

*As shipped, this product does not pose any health hazard because it does not contain ingredients which are known to cause immediate or serious effects.*

### FIRE AND EXPLOSION HAZARD DATA

*The product will not burn or explode.*

### REACTIVITY DATA

*The product is stable and non-reactive under normal conditions. This product will react with hydrofluoric, fluorosilicic, and phosphoric acids to produce corrosive gases. Hot, strong alkaline solutions will react with this product also.*

### TOXICOLOGICAL PROPERTIES

*As with any abrasive material, this product is irritating to skin and eyes. May be irritating to respiratory tract. Ingestion (acute/chronic) may be irritating to the digestive tract. Irritation is described as reversible inflammation. The potential hazard of solid particles depends on particle size and concentration per cubic metre of air.*

Particle size: Inhalable (< 100 µm) – when deposited anywhere in the respiratory tract  
 Thoracic (< 25 µm) – when deposited anywhere within the lung airways and the gas-exchange region  
 Respirable (< 10 µm) – when deposited in the gas-exchange region

*The following Threshold Limit Values (TLV's) refer to airborne concentrations of constituents in this product (and their effects as described by the ACGIH):*

<u>Substance</u>	<u>C.A.S. No.</u>	<u>PEL</u>	<u>TWA</u>	<u>STEL/C</u>	<u>Critical Effect(s)</u>
Synthetic Vitreous Fibres	65997-17-3	-	5	-	Irritation

**OSHA** PEL – Permissible Exposure Limit (mg/m<sup>3</sup>)  
**ACGIH** TWA – Time Weighted Average (mg/m<sup>3</sup>)  
 STEL/C – Short-term Exposure Limit / Ceiling (mg/m<sup>3</sup>)

## PREVENTATIVE MEASURES

Avoid breakage of bagged material or spills of bulk material. Use adequate ventilation and dust collection. Do not permit dust to collect on walls, floors, ledges, machinery, or equipment. Suggested use of dustless system (vacuum) for handling, storage and clean up so that airborne particulate does not exceed the permissible exposure limit. Suggested use of impervious gloves and safety goggles to reduce skin and eye contact. Avoid dry sweeping. Dispose in accordance with federal, state or local regulations. Material contaminated in use may have special disposal requirements. The following chart specifies the types of respirators to be used based on airborne concentrations of respirable crystalline silica. This chart has been provided as a guide for protection of personnel that may be exposed to airborne concentrations of any particulate matter.

<u>Airborne Concentration</u> (Respirable Free Silica)	<u>Type of Respirator Required</u>
< or equal to 10 X TWAEV	Half-mask particulate respirator with N-, R-, or P- series filter and 95, 99, or 100% efficiency.
< or equal to 25 X TWAEV	Powered air purifying respirator equipped with a hood or helmet, and any type of particulate filter; or supplied air respirator equipped with a hood or helmet and operated in a continuous flow mode.

TWAEV – time-weighted average exposure value

Where applicable, **respirators should be fitted, maintained, and cleaned in accordance with the regulations made under the Occupational Health and Safety Act.**

## FIRST AID MEASURES

- For skin contact, wash with soap and water.
- For eye exposure, flush with water and seek medical advice if irritation persists.
- For ingestion, seek immediate medical aid.
- For inhalation, remove to fresh air. If breathing difficulty is encountered, seek medical aid.

## PREPARATION INFORMATION OF MSDS

This MSDS was prepared from information provided by raw material suppliers to Opta Minerals.

**DATE ISSUED:** April 17, 2007

**CONTACT:** Operations Supervisor  
Quality Control Coordinator

For non-emergency questions, please contact your sales person.  
General enquiries may be directed to 905-689-6661 .