

Not a Hazardous Substance according to the Criteria of the Australian NOHSC.
Not a Dangerous Good according to the ADG Code.

Section 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

IDENTIFICATION

Product Name **SPHERICAL GLASS BEADS (100µm–5mm)**

Other Names Glass Microspheres: Grades 100µm to 5mm

Trade Names:
Potters Highway Safety Spheres (100µm to 5mm)
Ballontini Impact Beads (100µm to 5mm)

Manufacturer:
Potters Industries
Potters Industries

USE

Road marking and blasting media for wet or dry blasting.

COMPANY DETAILS

Company Name **Potters Industries Pty Ltd**

Address **HEAD OFFICE:**
100 - 102 Boundary Road
Laverton
VICTORIA 3028
Tel: (03) 8325 6777
Fax: (03) 9315 1601

Section 2. HAZARDS IDENTIFICATION

Emergency Overview: Large particle size white powder from 100µm to 5mm spheres (smooth spherical shape) with no odour. Not combustible. Fine dusts formed in use, can cause physical irritation to eyes and respiratory system and may cause dry skin and mild irritation.

Dangerous Goods Information: Not a Dangerous Good according to the ADG Code.

Hazardous Substances Information: Not a Hazardous Substance according to the Criteria of the Australian NOHSC.

Poison Schedule Not a Scheduled Poison

Acute Health Effects

Swallowed No harmful effects expected.
Large quantities swallowed may cause physical blockage of the digestive tract.

Eye For glass beads that are small enough to enter the eye: may cause physical irritation to eyes and may cause redness and tearing.

Skin No skin hazard for the as supplied spheres.
Fine dusts formed when used as blasting media, may cause dry skin and mild skin irritation.

Inhaled No inhalation hazard for the as supplied spheres.

Fine dusts formed when used as blasting media, may cause respiratory irritation, and may cause sneezing and dryness of the mucous membranes.

Chronic Health Effects

All Routes No chronic skin, eye, or respiratory hazards for the as supplied spheres.
For Chronic exposure to the fine dusts formed when used as blasting media see under Acute Effects.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Identity of Ingredients	CAS No.	Prop'n	Risk Phrases as 100%
Soda-Lime Glass Oxide (no added heavy metal oxides)	65997-17-3	>99.5%	-

Note: Contains no free crystalline silica. All components are amorphous (non crystalline).

Section 4. FIRST AID MEASURES

Swallowed	Immediately rinse mouth with water. Repeat until product is thoroughly removed. Give water to drink. Get medical attention if effects develop or persist.
Eye	Immediately rinse with plenty of water for at least 15 minutes. Eyelids to be held open. Obtain medical attention if physical irritation persists.
Skin	Wash contaminated skin with plenty of water. Get medical attention if irritation effects develop or persist.
Inhaled	Remove victim to fresh air. Get medical attention if health effects develop or persist.
First-Aid Facilities	Safety shower and eye wash facilities nearby.
Advice to Doctor	Treat symptomatically as for physical irritation. Chronic lung conditions may be aggravated by exposure to high dust concentrations when used as blasting media.

Section 5 - FIRE FIGHTING MEASURES

Fire or Explosion Hazard:	Solid, non combustible glass bead. Electrostatic discharges may occur when pumping / transferring / pouring the dry powder.
Extinguishing Media:	Any extinguishing media suitable for the surrounding area.
Combustion Product Hazards	No hazardous combustion products.
Special Protective Precautions & Equipment	Eye and Respiratory protection where fine dust clouds are formed when used as a blasting media. No other special precautions required.

Section 6 - ACCIDENTAL RELEASE MEASURES

Emergency Procedures	No special requirements. Place spillages in clean labeled containers for reuse, recycling or disposal. See <i>Section 13</i> for Disposal Considerations
Special Issues	Spilled material may be a slipping hazard.

Section 7 - HANDLING and STORAGE

Safe Handling	Keep container closed. Use only in well ventilated areas. Promptly clean up any spills or residues.
Safe Storage	Keep containers closed at all times. Store in original containers or in clean metal or plastic containers and keep dry.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards No exposure standards have been established for the Soda-Lime Glass Oxide ingredient in this product by NOHSC (Worksafe Australia).

SUBSTANCE	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³
Nuisance Dust, Inspirable	-	10	-	-

This standard is the manufacturer's recommendation for good practice when these beads are used as blasting media where fine dusts are formed.
 All atmospheric contamination should be minimised.

Design and Engineering Control Measures Use in well ventilated area. Avoid generating and inhaling dusts. When transferring the product consider the potential for electrostatic charge build up and the need to dissipate.

Personal Protective Equipment For the as supplied 100µm to 5mm glass beads: No special requirements.

For protection against dusts formed when used as a blasting media:

Avoid skin and eye contact. Avoid inhaling the dust. Follow normal industrial safety practices. The use of protective clothing and equipment depends on the degree and nature of exposure. The following personal protective equipment should be used:

- (1) Safety glasses, goggles or faceshield as appropriate.
- (2) Plastic, Rubber, Leather or Cotton gloves as appropriate.
- (3) Safety boots.
- (4) Overalls, splash apron or similar protective apparel.
- (5) Respiratory protection to AS1715/1716 when dusts levels are present.

Wash contaminated clothing and protective equipment before storing and re-using. The use of barrier cream is recommended to minimise the skin drying effects of this material.

Where applicable refer to the following Standards:

- | | |
|------------|--|
| AS/NZS1337 | Eye protectors for industrial applications |
| AS1715 | Selection, use & maintenance of respiratory protective devices |
| AS1716 | Respiratory protective devices |
| AS2161 | Industrial safety gloves and mittens |
| AS2210 | Safety footwear |
| AS3765 | Clothing for protection against hazardous chemicals. |

Section 9 - PHYSICAL and CHEMICAL PROPERTIES

Appearance and Odour	Large particle size white powder, from 100µm to 5mm smooth spheres, with no odour.	
Chemical Formula	Na ₂ SiO ₃ / Na ₂ O / CaO (fused ingredients general formulae, no added heavy metal oxides)	
Melting Point / Boiling Point	MP: >600°C (softens)	BP: Not determined
Decomposition Temperature	Not determined	
Vapour Pressure	Not determined	

Relative Vapour Density	Not applicable
Specific Gravity or Density	2.5 g/cm ³
Bulk Density	500-1000 kg/m ³ (with narrow ranges for each microsphere size) Bulk density does vary with size.
Solubility	Rate of solubility is dependant on environment. Presences of alkali accelerate dissolution particularly above a pH of 9.
pH	7 to 9 (of a 5% slurry when left for several hours - estimated)
Percent Volatile	<0.5%
Octanol/Water Partition	Not applicable (not soluble in either fraction)
Co-efficient	
Corrosiveness	No corrosive effects known
Flammable Properties	Non combustible solid.
Flashpoint	Not applicable
Flammability Limits (FL) (%)	Not applicable
Autoignition Temp	Not applicable
Particle Size	Refer to specific grade

Section 10 - STABILITY AND REACTIVITY

Chemical Stability	Stable.
Conditions To Avoid:	Dust cloud formation.
Incompatible Materials:	None in particular. Strong bases may eventually dissolve the glass microspheres. Hydrofluoric Acid solutions will readily dissolve these glass microspheres.
Unsuitable Container Materials:	None in particular. Containers should allow any electrostatic charges built up to dissipate
Hazardous Decomposition Products:	If Overheated: None known.
Hazardous Reactions:	None known.

Section 11 - TOXICOLOGICAL INFORMATION

Toxicity Data: **Acute Oral Toxicity** LD50 (rat): >5000 mg/kg (estimated)

Eye Irritation: No eye irritation.

Skin Irritation: No skin irritation.

Oral Toxicity: When a similar product was tested for acute oral toxicity to rats at a dosage level of 500 mg/kg body weight, all animals survived and gained weight.

Respiratory Toxicity: No Inspirable/Respirable Fraction (as supplied spheres)

For Dusts Formed when used as a Blasting Media: When a similar product was tested for respiratory toxicity in a 6-month intratracheal study in rats, no mortalities, untoward reactions, or observations correlated with exposure to the product. Minimal multifocal inflammation of the lung occurred in 90% of males and 80% of females. No appreciable increase in fibrous tissue was present in these lesions.

Eye Irritation: Not an Eye Irritant.

Human Experience: 30 years experience handling the product in a manufacturing facility have not lead to any reported skin, eye or respiratory irritation effects.

Skin Irritation: Not a Skin Irritant.

Carcinogenic Effects: Not listed as a Carcinogen by the WHO IARC, USA NTP or USA OSHA.

Note: Contains no free crystalline silica. All components are amorphous (non crystalline).

Section 12 - ECOLOGICAL INFORMATION

General: Avoid contaminating waterways. Not expected to be an environmental hazard provided glass oxides do not contain added heavy metals. May physically block systems.

Ecotoxicity Data: No data available. Not expected to be harmful to the environment.

Mobility Sinks in water. Immobile in soil.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods & Containers Disposal to be in accordance with Local, State & Federal EPA waste regulations. Normally suitable for disposal at approved land waste. Avoid releasing dusts.

Landfill, Incineration May be landfilled. Not suitable for incineration.

Section 14 - TRANSPORT INFORMATION

ROAD & RAIL: Not defined as a Dangerous Good: by the Australian Code for the Transport of Dangerous Goods by Road & Rail.

SEA: Not a Dangerous Good according to the International Maritime Dangerous Goods Code (IMDG Code).

AIR: Not a Dangerous Good according to the International Air Transport Association (IATA) Dangerous Goods Regulations.

Section 15 - REGULATORY INFORMATION

Labelling: **Not a Workplace Hazardous**
Not a Scheduled Poison
Not a Dangerous Good

Packaging Any type. However, consider the potential for electrostatic charge dissipation.

Australian Chemical Control Schemes

NICNAS – AICS	<i>All ingredients are on the Australian Inventory of Chemical Substances.</i>	
Aust. Pesticides & Veterinary Medicine Authority -	Ag & Vet Chemicals	<i>Not applicable</i>
Therapeutic Goods Administration -	Medicines	<i>Not applicable</i>
Food Standards Australian & New Zealand -	Food	<i>Not applicable</i>
Chemicals	<i>Not applicable</i>	Ozone Depleting <i>Not applicable</i>
Weapons Act		Substance Act

Section 16 - OTHER INFORMATION

MSDS Dates and Revisions

MSDS Original Preparation Date : 1 December 2004

MSDS Latest Revision Date : 18 March 2010

Sections Changed in Latest Revision: -

Plant Manager: phone: (03) 93147555 fax: (03) 93151601
P Lutterschmidt email: jlutterschmidt@potters.net.au

MSDS APPROVED : 18 March 2010

Acronyms Used

ADG Code Australian Dangerous Goods Code for the Transport of Dangerous Goods by Road & Rail

NOHSC Australian National Occupational Health and Safety Commission

WHS Workplace Hazardous Substance

CAS No. Chemical Abstracts Service Registry Number

UN No. United Nations Dangerous Goods Number

MSDS Code Used This MSDS has been prepared according to the National Code of Practice for the Preparation of Material Safety Data Sheets [NOHSC:2011(2003)]

This MSDS summarises to the best of our knowledge the health and safety hazard information on the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.