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SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

IDENTIFICATION

Product Name	Glass Beads
Other Names	Glass Microspheres

Use road marking and blasting media for wet or dry blasting.

COMPANY DETAILS

Company Name	Parmadar Pte Ltd
Address	34 Pioneer Sector 2, Singapore 628389
Telephone	(65) 6861 0328 / (65) 97301750
Email Address	sales@parmadar.com

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

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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.
Physical Hazards	Spilled material is very slippery. Abrasive blasting is major noise hazard and can result in the generation of heat, sparks and static electricity discharge.

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)

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SECTION 4. FIRST AID MEASURES

Swallowed	Immediately rinse mouth with water. Repeat until product is thoroughly removed.
Eye	Give water to drink. Get medical attention if effects develop or persist. 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

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

Emergency Procedures	No special requirements. Place spillages in clean labeled containers for reuse, recycling or disposal. See Section 13 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.

SUBSTANCE	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
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

Avoid skin and eye contact. Avoid inhaling the dust. Follow normal industrial safety practices. The use of protective safety glasses, faceshield, gloves, safety boots is necessary.

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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	Na2SiO3 / Na2O / 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/cm3
Bulk Density	500-1000 kg/m3 (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 Co-efficient	Not applicable (not soluble in either fraction)
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

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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.
	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).

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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 in water. Immobile in soil.

SECTION 12 - ECOLOGICAL INFORMATION

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	May be landfilled.

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.

SECTION 16 - OTHER INFORMATION

This SDS 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.