ADAE PTY LTD TRADING AS
Dana-Ridge
A.B.N. 93 109 483 007
12/67 Bancroft Road Pinkenba QLD 4008
Phone +61 3860 4913 Australia Toll-free 1800 806 316

MATERIAL SAFETY DATA SHEET

AQUA SHEEN GLASS BEAD

Not classified as hazardous According to Criteria of Worksafe Australia

IDENTIFICATION

Product Name	Spherical Glass Beads (100ų-5mm)
Other Names	Glass Microspheres: Grades 100ų to 5mm
Trade Names	Ballotini Impact Sphere: Grades 100ų to 5mm
Use	Blasting media for wet or dry blasting
Issue Date	12th July, 2018

HEALTH HAZARD INFORMATION

Emergency Overview	Large particle size white powder from 100ųm to 5mm spheres (smooth spherical shape) with no odor. 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 Australian Dangerous Goods Code for the Transport of Dangerous Goods by Road & Rail.
Hazardous Substances Information	Not a Hazardous Substance according to the Criteria of the Australian National Occupational Health and Safety Commission.
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 mid 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.

COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Identity of Ingredients	**CAS No.**	**Prop'n**	**Risk Phase 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).			

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.

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.

ACCIDENTAL RELEASE MEASURES

Emergency Procedures	No special requirements. Place spillages in clean labelled containers for reuse, recycling or disposal. See Disposal Considerations section.
Special Issues	Spilled material may be a slipping hazard.

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.

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**	
Nuisance Dust, Inspirable	ppm	mg/m3	ppm	mg/m3
	-	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 minimized.

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 dust levels are present. Wash contaminated clothing and protective equipment before storing and re-using. The use of barrier cream is recommended to minimize the skin drying effects of this material. Where applicable refer to the following Standards:

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

PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour	Large particle size white powder, from 100ų 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: >600ºC (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.

Spills & Disposal: Spillage may result in slippery conditions
Fire/Explosion Hazard: None

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.

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).	

ECOLOGICAL INFORMATION

General	Avoid contaminating waterways. Not expected to be an environment hazard provided glass oxides do not contain added heavy metals. May physically block system.
Ecotoxicity Data	No data available. Not expected to be harmful to the environment.
Mobility	Sinks in water. Immobile in soil.

DISPOSAL CONSIDERATIONS

Disposal Methods and Containers	Disposal to be in accordance with Local, State and Federal EPA waste regulations. Normally suitable for disposal at approved land waste. Avoid releasing dusts.
Landfill	May be landfilled.
Incineration	Not suitable for incineration.

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TRANSPORT INFORMATION

Road and 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.

REGULATORY INFORMATION

Not a Workplace Hazard **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	*All ingredients are on the Australian Inventory of Chemical Substances.*	
Aust. Pesticides & Veterinary Medicine Authority	-Ag & Vet Chemicals	*Not applicable*
Therapeutic Goods Administration	-Medicines	*Not applicable*
Food Standards Australian & New Zealand	-Food	*Not applicable*
Chemicals Weapons Act	*Not applicable*	
Ozone Depleting Substance Act	*Not applicable*	

This MSDS summaries to the best of our knowledge the health and safety hazard information on this 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.