



Melbourne Head Office  
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## Safety Data Sheet – Zirblast® Ceramic Beads

### Section 1 – Identification: Product Identifier and Chemical Identity

**Product Name:** Zirblast®

**Synonyms:** Electrofused Ceramic Beads

**REACH Registration No:**

Exempted from registration under REACH regulation EC N°1907/2006

**Intended Use:** Media for surface treatment by impact

**Supplier Name:** Abrasive Blasting Service & Supplies Pty Ltd (ABSS)

**Supplier Address:** 18 Beckett Avenue Keilor East, Vic 3033

**Supplier Phone:** 03 9336 1961

**Supplier Fax:** 03 9331 6223

**Supplier Email:** [info@abss.net.au](mailto:info@abss.net.au)

**Emergency Phone Numbers:**

1300 727 240 (during business hours) or 0409 123 044 (after hours)

000 – Medical Emergency Services – 24hrs

### Section 2 – Hazard(s) Identification

**Classification of the substance or mixture:**

CLP regulation EC 1272/2008 Ceramic beads are not classified as hazardous product

OSHA GHS (US) Ceramic beads are not classified as hazardous product

**Label Elements** Not required under regulation EC 1272/2008 (CLP) and OSHA GHS (US)

**Other Hazards**

**Adverse Effects on Health** Possible irritation through abrasive friction

Surface Treatment beads by impact may generate dust



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**NFPA Hazard Rating:** Reactivity: 0  
Flammability: 0  
Health: 0

**WHMIS:** **Not Hazardous**

### Section 3 – Composition and Information on Ingredients

N°CAS	N°EINECS	Components	Weight %
1314-23-4	215-227-2	Zirconium Dioxide (ZrO <sub>2</sub> )	60 to 70 %
60676-86-0	262-373-8	Silica Glass (SiO <sub>2</sub> )	28 to 33%
1344-28-1	215-691-6	Alumina (Al <sub>2</sub> O <sub>3</sub> )	<10%

Additional information:

- The ingredients of the silica-alumina vitreous phase cannot be dissociated by the product application in surface treatment by impact and it is free from crystalline silica
- The product contains traces of Naturally Occurring Radioactive Material coming from impurities Uranium and Thorium U+Th<500 ppm (Series U230, U235, and TH232)
- The product contains traces of fibrous particles ( in the range of ppm) with same chemical composition as the beads (from production processing)

### Section 4 – First Aid Measures

#### Description of Symptoms and First Aid Measures

##### **Inhalation:**

Supply Fresh Air.

##### **Skin Contact:**

Rinse with Water

##### **Eye Contact:**

Rinse thoroughly. If irritation persists, consult an ophthalmologist.

##### **Ingestion:**

Rinse out mouth and then drink plenty of water



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### **Most important symptoms and effects, both acute and delayed:**

No data available

May be abrasive through friction.

### **Indication of immediate medical attention and special treatment needed**

Treat Symptomatically

### **Personal Protection in First Aid and Measures:**

Use appropriate personal protection equipment (PPE)

If exposed or concerned, get medical advice and attention

## **Section 5 – Fire-Fighting Measures**

### **Extinguishing Media**

**General Information:** Not Flammable

**Extinguishing Media:** Use the adequate extinguisher according to the fire source. All extinguishing agents can be used.

### **Special Hazards arising from the substance or mixture**

This product is not combustible or explosive

Does not present any particular risk in the event of fire

### **Advice for Firefighters**

Does not require any particular methods

Wastes/Residues with Zirblast® are not to be discharged into drains or rivers (see section 13)

### **Protection of Fire-Fighters**

Use Appropriate protective equipment



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### **Section 6 – Accidental Release Measures**

#### **Personal Precautions, Protective Equipment and Emergency Procedures**

Avoid contact with the eyes and inhalation of dust.

Wear personal protective equipment as requested in Section 8.

#### **Environmental Precautions**

Do not discharge into drains and rivers.

#### **Methods and material for containment and cleaning up**

Vacuum up the product

Risk of slipping when present on the ground.

#### **Reference to other sections**

See section 7 for information on safe handling

See section 8 on personal protective equipment

See section 13 for disposal considerations

### **Section 7 – Handling and Storage**

#### **Precautions for Safe Handling**

Technical Measures: Avoid creating dusty conditions by using appropriate equipment (dust collectors/ vacuum cleaner, ventilation,..)

Precautions:

- For Operations generating dust
- Wear P3 dust mask (or N95 for US)
- Wear safety goggles
- Wear Gloves



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### Conditions for Safe Storage, including any incompatibilities

Technical Measures: Does not require any specific or particular technical measures  
Avoid high humidity  
In case of leakage from packaging (BB, drums, etc.), product should be collected and disposed in authorized area (see section 13)

Recommended Storage Conditions:

Dense material: observe safety rules when stacking

**Specific End Use(s)** See Section 1

### **Section 8 – Exposure Controls and Personal Protection**

#### **Control Parameters**

**Engineering Measures** Use in an enclosed cabinet or containment with an equipment able to capture the dust.

#### **Occupational Exposures Limit**

Product/Ingredient name	Exposure Limit Values
Zirblast®	ACGIH TLV (US) - Europe TWA : 5 mg/m <sup>3</sup> as Zr 8 hours (long term value) STEL : 10 mg/m <sup>3</sup> as Zr 15 mn (short term value)

Follow workplace regulatory exposure limits for all types of air born dust (e.g. total dust, respirable dust)

#### **Exposure Controls**

**Appropriate Engineering Controls:** Good general ventilation should be sufficient to control worker exposure to airborne particles. If user operations generate dust use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Additional Information:** This product contains traces of Naturally Occurring Radioactive Materials (NORM), Maximum exposure of a worker, working full time in the vicinity of product will not exceed the regulatory limit value of 1mS/year



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### **Personal Protective Equipment:**

**Materials for Protective Clothing:** Safety Shoes/ No Special protective clothing is required

**Hand Protection:** Wear suitable safety gloves. Recommended: Leather gloves

**Eye Protection:** Wear safety goggles.

**Respiratory Protection:** Wear a P3 dust mask (or N95 for US) during any operation which might generate dust.

**Other information:** No special protective clothing is required.

### **Hygiene Exposure Controls**

Do not drink, eat or smoke during usage

### **Environmental Exposure Controls**

Avoid creating dusty conditions and prevent wind dispersal

### **Personal Protective Equipment (pictograms)**





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### Section 9 – Physical and Chemical Properties

#### Information on Basic Physical and Chemical Properties

Physical State	Beads
Appearance	White
Odour	Odourless
Median Diameter	< 1.2 mm
Melting Point	1850°C and 2550°C
Flash Point	Not Applicable
Flammability (solid Gas)	Not Applicable
Upper/Lower Flammability or explosive limited	Not Applicable (product does not present an explosion hazard)
Auto/Self-ignition Temperature	Not Applicable
Bulk Density	2.3 kg/dm <sup>3</sup>
Specific Gravity	3.8 kg/dm <sup>3</sup>
Solubility	Insoluble
Partition coefficient: n-octanol/water	Not Applicable
Viscosity	Not Applicable

Other Information                      No additional information

### Section 10 – Stability and Reactivity

Reactivity	This product is non-reactive under normal conditions of use, storage and transport
Chemical Stability	Stable under normal conditions of use and below 1300°C
Possibility of Hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur
Conditions to Avoid	No dangerous reactions known under normal conditions of use/ Avoid formation of dust
Incompatible Materials	Material to avoid – Reacts with strong acids and bases
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition of products should not be produced



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### Section 11 - Toxicology

#### Information on Toxicological Effects – Product

Acute Toxicity	Based on Available data, the classification criteria are not met
LD/LC50 Values relevant for classification	None
Primary Irritant effect	The dust can cause mechanical irritation of the eyes and the respiratory tract
Carcinogenicity	Not available
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met
Reproductive Toxicity	Based on available data, the classification criteria are not met
Probable route of exposure	Inhalation, eye contact, skin contact
STOT- Single Exposure	Based on available data, the classification criteria are not met
STOT – Repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met

### Section 12 – Ecological Information

#### Toxicity

Ecotoxicity	No data available
Effects on aquatic organisms	No data available
Persistence and degradability	Not readily biodegradable
Bioaccumulative	No data available
Mobility in soil	No data available
Results of PBT and vPvB Assessment	Not relevant
Other adverse effects	No data available

### Section 13 – Disposal Considerations

#### Methods of Disposal

Recycle where possible. The generation of waste should be minimized wherever possible

The user of this material has the responsibility to dispose of unused materials, wastes and containers in conformance to the relevant regulations where the product is used.



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Dispose of surplus of product and non-recyclable product wastes in an authorised site only.

Disposal mode and classification of the waste materials from surface treatment should be defined by a physio-chemical analysis.

European Waste Code number of waste blasting materials other than those containing dangerous substances: 12 01 17

### **Contaminated Packaging**

Destruction/Disposal – Dispose of an authorised site.

### **Hazardous Wastes**

Within the present knowledge of the supplier, this product is not regarded as hazardous wastes, as defined by the EU Directive 91/689/ECC.

The product contains traces of naturally Occurring Radioactive Material (NORM) and should follow the EU directive 2013/59

### **Section 14 – Transport Information**

	<b>ADR/RID</b>	<b>DOT</b>	<b>IATA</b>	<b>IMDG</b>
UN Number	Not Regulated	Not Regulated	Not Regulated	Not Regulated
UN Proper shipping name	-	-	-	-
Transport Hazard class(es)	-	-	-	-
Packing Group	-	-	-	-
Environmental Hazard	No.	No.	No.	No.
Special Precautions for user	Not Available	Not Available	Not Available	Not Available

### **Additional Information**

Transport in bulk according to Annex II of Marpool and the IBC Code – Not applicable

This product contains traces of Naturally Occurring Radioactive Material (NORM) and has no restriction for transportation purpose (IAEA Limit < 10 Bq/g)



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### **Section 15 – Regulatory Information**

**Safety Health and Environmental regulations/legislation specific for the substance or mixture.**

#### **Regulation CLP (EC) 1272/2008:**

The ceramic beads are not classified as a dangerous product

#### **Regulations for USA:**

All constituent substances are listed on TSCA (Toxic Substance Control Act) None of the constituent substances are listed in Proposition 65 (California)

#### **Chemical Safety Assessment**

A chemical safety assessment has not been carried out

### **Section 16 – Additional Information**

#### **Restrictions of Use**

This product must not be used for applications other than those indicated in § 1

#### **Abbreviations and acronyms**

ADR: European treaty on the international transportation of hazardous substances

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstract Service

PBT: Persistent, Bio-accumulate, Toxic

SVHC: Substances of very High Concern

vPvB: Very Persistent and Very Bioaccumulative

NORM: Naturally Occurring Radioactive Materials



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This SDS has been prepared by Abrasive Blasting Service & Supplies Pty Ltd in accordance with the “*Global Harmonized System of Classification and Labelling of Chemicals, 3<sup>rd</sup> Revised Edition*” and Safe Work Australia’s “*Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals*” – Dated February 2016.

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