

MATERIAL SAFETY DATA SHEET

24/12/2009

GlassSand™

Section 1 - CHEMICAL PRODUCT & COMPANY IDENTIFICATION

| | |
|------------------------|--|
| PRODUCT NAME | <i>GlassSand™</i> |
| SYNONYMS | Glass, Glass Fines, Glass Granulates, Glass Aggregate |
| PRODUCT USE | Used as a filling sand, turf underlay, pipe bedding, drainage medium, industrial filler, shot-blasting medium and as a fine aggregate in asphalt, mortar and concrete. The product is manufactured in accordance with the recovered glass sand exemption criteria issued by the Department of Climate Change and Water (DECC) for further information on uses please refer to the DECC website www.environment.nsw.gov.au Glass Granulates undertakes sampling and testing in accordance with the recovered glass sand exemption criteria. |
| SUPPLIER | Company: Glass Granulates Pty Ltd (Glass Granulates is a 50% Joint Venture between Visy Pty Ltd and Benedict Sand & Gravel) |
| Address | 146 Newbridge Road Moorebank NSW 2170 AUSTRALIA |
| Postal Address | PO Box 875 St Ives NSW 2075 AUSTRALIA |
| Phone | +61 2 9986 3500 |
| Emergency Phone | 0425 282 208 |
| Fax | +61 2 9986 3555 |

Section 2 - HAZARDS IDENTIFICATION

| | | | |
|--------------------------------------|--|--------------------|--|
| STATEMENT OF HAZARDOUS NATURE | NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code. | | |
| POISONS SCHEDULE | None | RISK SAFETY | None under normal operating conditions. None under normal operating conditions. |

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME | CAS RN | % |
|---|--------|-------|
| glass cullet comprising | | |
| <i>bound amorphous silica</i> | | 70-80 |
| <i>bound metal oxides (Ca, Mg, Na, Li, K, Al)</i> | | 20-30 |
| <i>other metal oxides</i> | | <1 |
| May contain small amounts of paper and plastic pulp fragments | | |
| Contains no free crystalline silica | | |

MATERIAL SAFETY DATA SHEET

GlassSand™ Contd.

Section 4 - FIRST AID MEASURES

SWALLOWED

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

- Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered a significant fire risk, however containers may burn.

MATERIAL SAFETY DATA SHEET

GlassSand™ Contd.

Section 5 - FIRE FIGHTING MEASURES Contd.

| | | | | | | | |
|-----------------------------|--|----------------|-----------------|---------------|----------------------------------|-------------------|-------------|
| FIRE INCOMPATIBILITY | None known | | | | | | |
| HAZCHEM | None | | | | | | |
| PERSONAL PROTECTION | <table border="0"> <tr> <td>Glasses</td> <td>Safety Glasses.</td> </tr> <tr> <td>Gloves</td> <td>When handling larger quantities:</td> </tr> <tr> <td>Respirator</td> <td>Particulate</td> </tr> </table> | Glasses | Safety Glasses. | Gloves | When handling larger quantities: | Respirator | Particulate |
| Glasses | Safety Glasses. | | | | | | |
| Gloves | When handling larger quantities: | | | | | | |
| Respirator | Particulate | | | | | | |

Section 6 - ACCIDENTAL RELEASE MEASURES

| | |
|---------------------|--|
| MINOR SPILLS | Sweep/Shovel up |
| MAJOR SPILLS | <p>Sweep/Shovel up</p> <p>Personal Protective Equipment advice is contained in Section 8 of the MSDS.</p> |

Section 7 - HANDLING & STORAGE

| | |
|--------------------------------|--|
| PROCEDURE FOR HANDLING | No special handling procedures required. |
| SUITABLE CONTAINER | Not applicable. Supplied in bulk. |
| STORAGE INCOMPATIBILITY | None known. |
| STORAGE REQUIREMENTS | No special storage precautions required. |

MATERIAL SAFETY DATA SHEET

GlassSand™ Contd.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

MATERIAL DATA

GLASSSAND:
REL TWA: 10 mg/m³ inspirable dust (nuisance dust)

PERSONAL PROTECTION

EYE

- None required when handling small quantities.

Otherwise:

- Safety glasses with side shields.

HANDS/FEET

- Wear physical protective gloves, eg. leather.
- Wear safety footwear.

OTHER

- No special equipment needed when handling small quantities.

Otherwise:

- Overalls.
- Barrier cream.
- Eyewash unit.

RESPIRATOR

| Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|-------------------|----------------------|----------------------|------------------------|
| 10 x ES | PI Air-line* | - | PAPR-P1 - |
| 50 x ES | Air-line** | P2 | PAPR-P2 |
| 100 x ES | - | P3 | - |
| | | Air-line* | - |
| 100+ x ES | - | Air-line** | PAPR-P3 |

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

MATERIAL SAFETY DATA SHEET

GlassSand™ Contd.

Section 9 - PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE

Fawn/brown to transparent granules with no odour; insoluble in water.
Particles are not larger than 5mm.

PHYSICAL PROPERTIES

Does not mix with water.
Sinks in water.

| | | | |
|---------------------------|----------------|---------------------------------|----------------|
| State | Divided Solid | Molecular Weight | Not Applicable |
| Melting Range (°C) | ~900 | Viscosity | Not Applicable |
| Boiling Range (°C) | Not Applicable | Solubility in water (g/L) | Immiscible |
| Flash Point (°C) | Not Applicable | pH (1% solution) | Not Applicable |
| Decomposition Temp (°C) | Not Available | pH (as supplied) | Not Applicable |
| Autoignition Temp (°C) | Not Available | Vapour Pressure (kPa) | Not Applicable |
| Upper Explosive Limit (%) | Not Applicable | Specific Gravity (water=1) | 2.2-2.5 |
| Lower Explosive Limit (%) | Not Applicable | Relative Vapour Density (air=1) | Not Applicable |
| Volatile Component (%vol) | Not Applicable | Evaporation Rate | Not Applicable |

Section 10 - CHEMICAL STABILITY & REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Product is considered stable and hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- Considered to be non toxic. Not normally a hazard due to the physical form of product.
The material is a physical irritant to the gastro-intestinal tract.

EYE

- Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.

contd.

MATERIAL SAFETY DATA SHEET

GlassSand[™] Contd.

Section 11 - TOXICOLOGICAL INFORMATION Contd.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SKIN

- The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Abrasive damage however, may result from prolonged exposures. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED

- Generated dust may be discomforting. Inhalation of dust may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema.

CHRONIC HEALTH EFFECTS

- Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.

TOXICITY & IRRITATION

- Not available. Refer to individual constituents.

Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

GLASSSAND:

- DO NOT discharge into sewer or waterways.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM

None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

MATERIAL SAFETY DATA SHEET

GlassSand[™] Contd.

Section 15 - REGULATORY INFORMATION

| | |
|-------------------------|-------------------------------------|
| POISONS SCHEDULE | None |
| REGULATIONS | No data for GlassSand (CW: 22-3799) |

Section 16 - OTHER INFORMATION

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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This is the end of the MSDS.