MATERIAL SAFETY DATA SHEET

Silica Sand

Revised 5/08/2005

Statement of Hazardous Nature

This product is classified as hazardous according to the criteria of the National Occupational Health and Safety Commission (NOHSC).

Enquiries

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IMPORTANT NOTICE

This material Safety Data Sheet (MSDS) is issued by Benedict Sand & Gravel and Glass Granulates, in accordance with National Occupational Health and Safety Commission (NOHSC) guidelines. As such the information in it must not be altered, deleted or added to, Benedict Sand & Gravel and Glass Granulates will issue a new MSDS when there is a change in product specifications and/or NOHSC guidelines/regulations. Benedict Sand & Gravel and Glass Granulates will not accept any responsibility for any changes made to its MSDS by any other person or organisation.

Product Name	Silica Sand
Applicable in	Australia
Other Names	Washed Sand, Filling Sand, Brickies Sand, Turf Sand, Asphalt Sand, Concrete Sand, Bunker Sand, Topdressing Sand.
Manufacturers Product Code	Not Applicable
UN Number	None Allocated
Dangerous Goods Class & Subsidiary Risk	None Scheduled
Hazchem Code	None Allocated
Poisons Schedule Number	None Allocated

Uses

Used as filling sand, turf underlay, and as a fine aggregate in mortar and concrete.

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Characteristics

PHYSICAL DESCRIPTION / PROPERTIES	
Appearance	Granular Sand ranging in colour from tan to orange brown.
Boiling Point (°C)	Not Applicable
Melting Point (°C)	Not Applicable
Vapour Pressure	Not Applicable
Specific Gravity (H_2O=1)	2.0 – 3.0
Flashpoint	Not Applicable
Flammability Limits	Not Applicable
Solubility in Water	Insoluble
Auto-ignition Temperature (°C)	Does not auto-ignite
Odour Threshold	Normally no odour
pH, at Standard Concentration	Between 4.5 – 7.0
Molecular Weight	Not Determined

INGREDIENTS

Chemical Name	CAS Number	Proportion	Exposure Limits
Sand – Crystalline Silica (quartz)	14808-60-7	>95%	0.2 mg/m^3 TWA
Mineral and Organic Impurities	Various	<5%	

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HEALTH HAZARD INFORMATION

Silica Sand is a granular sand used as a filling sand and turf underlay as well as a fine aggregate in mortar and concrete. The health hazards are mainly related to dust generated containing crystalline silica during handling. **Repeated inhalation of crystalline silica may cause serious illness (see Chronic Health Effects). Repeated inhalation of crystalline silica may add to or multiply the serious health effects caused by tobacco smoke.** Inhaling dust containing crystalline silica may cause scarring of the lung (silicosis), lung cancer, and chronic bronchitis, and may increase the risk of scleroderma (thickening of the connective tissue) and kidney disease (increased prevalence of renal abnormalities and end-stag: renal disease from glomerulonephritis). It is therefore essential to avoid inhalation of dust.

HEALTH EFFECTS	***ACUTE***
Swallowed	Unlikely under normal conditions of use, but swallowing this product will result in abdominal discomfort.
Eye	Dust from this product may irritate the eyes causing watering and redness.
Skin	Silica Sand and dust may be irritating and abrasive to the skin.
Inhaled	The dust may irritate the nose, throat and respiratory tract.
HEALTH EFFECTS	***CHRONIC***
Inhaled:	Repeated inhalation of silica sand dust containing crystalline silica may cause scarring of the lung (silicosis), lung cancer, and chronic bronchitis, and may increase the risk of scleroderma (thickening of the protective tissue) and kidney disease. Studies have shown that smoking increases the risk of bronchitis, silicosis and lung cancer in persons exposed to crystalline silica.
FIRST AID	
Swallowed	Give water to drink. Seek medical advice.
Eye	Flush eyes thoroughly with running water
Skin	Wash skin with soap and water
Inhaled	Remove to fresh air
Advice to Doctor	Treat symptomatically

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PRECAUTIONS FOR USE

Exposure Standards	Australian Occupational Exposure Standards (OES); (NOHSC 1003 National Exposure Standards): Exposures must be minimised to as low as reasonably practicable. **Crystalline silica**: All exposures must be minimised to as low as is reasonably practicable and in all situations to below 0.2 mg/cubic metre. It is recommended that levels of respirable crystalline silica be kept below 0.05mg/cubic metre.
Engineering Controls	Keep exposures to dust as low as practicable, with the aim of maintaining respirable dust levels to below 0.05 mg/m3 TWA (time-weighted average). Work in the open air and the opening of external openings (such as doors and windows in buildings) generally provides adequate ventilation. Local mechanical ventilation or extraction may be required in areas where dust could escape into the working environment.
Ventilation	None required if engineering and handling controls are adequate. If dust is generated, wear respiratory protection for particulates conforming to Australian Standards AS/NZS 1715 and 1716, category P1 or P2.
Special Considerations for Repair/Maintenance	Avoid breathing dust. Where possible vacuum or wash down gear, equipment or mobile plant prior to maintenance and repair work. If compressed air cleaning cannot be avoided, wear eye and respiratory protection and clothing as listed below.
Personal Protection/ Skin Protection	Wear loose comfortable clothing and gloves (standard duty leather or equivalent AS 2161: Industrial safety gloves and mittens). Wash work clothes regularly.
Eye Protection	Dust resistant non-fogging safety goggles or glasses (AS/NZS 1336: Recommended practices for eye protection in the industrial environment) should be worn if exposed to dust.
Respiratory Protection	None required if engineering and handling controls are adequate. If dust is generated, wear a P1 or P2 particulate respirator (dust mask) conforming with Australian Standards AS/NZS 1715: Selection, use and maintenance of respiratory protective devices and AS/NZS 1716: Respiratory protective devices when exposed to dust.
Personal Hygiene	Flush dust off skin with water or wash skin with mild soap and water after working with product.
Flammability	Silica Sand is not flammable, does not support combustion of other materials, and does not cause dust explosions.

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SAFE HANDLING INFORMATION

Storage And Transport

Avoid breathing and dust. Respirable particles can be generated during processing, handling, and storage. Use proper control measures including ventilation, enclosure of materials, covering loads on trucks, and wetting down material whilst in use.

When stockpiling and handling large quantities of material, care should be taken to avoid having the faces of the stockpile steeper than the natural angle of repose of the material. Steep faces can fall without warning and trap persons resulting in injury and possible suffocation. When transporting by road, all loads should be covered.

Spills and Disposal

Spilled material should be wet down with water to reduce dust generation before cleanup. If unable to reuse or recycle, dispose of waste materials at an authorised landfill site in accordance with local authority guidelines. (see Ecological and Disposal Considerations)

Care should be taken to prevent leakage of material into drains and other catchment areas.

Fire/Explosion Hazard

Silica sand is non-flammable and non-explosive.

Smoking & Other Dust

Benedict Sand & Gravel recommends that all work areas should be non-smoking areas.

CONTACT POINT for furthur information

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