Burdett's
Safety Data Sheet

Dried Sands

Section 1. Supplier & Product Information		
Company Information		
Company *Address* *Telephone* *Contact* *Email*	**Burdett Sand Soil & Stone Pty Ltd** P.O. Box 4123 Langwarrin 3910 (03) 9789 8266 / 0428 267 143 Paul Marsh tech@burdetts.com.au	
Product Information		
Generic Product Name	Silica Sand	
Other Names	Foundry Sand	Filter Sand
	Sports 38, F45, F55, F70	16/30, 18/40, 8/16, 6/3
Use	Product-specific	

Section 2. Hazard identification	
Hazardous Classification	Classified as a Hazardous Substance according to Safe Work Australia
GHS Classifications	Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
Dangerous Goods Class	Not classified as a Dangerous Good by the criteria of the ADG Code, IMDG or IATA
UN Number	None Allocated
Hazchem Code	None Allocated
Poisons Schedule Number	None Allocated
Label Elements	
Signal word	**WARNING**
Pictogram	
Hazard Statement(s)	H373 May cause damage to organs (lungs) through prolonged or repeated exposure (inhalation).
Prevention Statement(s)	P260 Do not breathe dust.
Response Statement(s)	P314 Get medical advice/attention if you feel unwell.
Storage Statement(s)	None allocated
Disposal Statement(s)	P501 Dispose of contents/container in accordance with relevant regulations.
Other Hazards	The hazard information provided in this Safety data Sheet applies to dusts, particularly quartz (crystalline silica) dust within the Silica sand and particularly inhalable dust particles with a diameter less than 30 micron.

Section 3. Composition/information on ingredients		
Name	**CAS No.**	**Proportion**
Sand		
Quartz (crystalline silica)	14808-60-7	>99%
Mineral and organic impurities		Balance

Section 4. First-aid measures	
Swallowed	Rinse mouth with water. Do not induce vomiting. Seek medical attention if any abdominal symptoms
Eye	Flush eyes with running water for 15 minutes while holding eyelids open. If irritation persists seek medical assistance
Skin	Remove heavily contaminated clothing. Wash thoroughly with mild soap and water. If irritation persists seek medical attention
Inhalation	Remove person from source of contamination to fresh air. Dust in throat or nasal passages should clear spontaneously. If irritation persists seek medical attention
Advice to doctor	Treat symptomatically or consult Poisons Information Centre

Section 5. Fire-fighting measures	
Flammability	Not flammable or combustible
Hazards from combustion products	None
Extinguishing media	Not applicable
Special protective equipment and precautions for firefighters	None for Silica sand Use as required for fire in surrounding materials
Hazchem Code	None Allocated

Section 6. Accidental release measures	
Methods and materials for containment and clean- up	Follow precautions in this SDS. If possible, pick up and re-use clean materials. Collect large spills with mechanical device avoiding dust generation. Where dust may be generated, we recommend using a vacuum device to collect spill or wet the spilled material before sweeping. The use of respiratory equipment (e.g. P2 mask) may be necessary dependant on the size of the spill and amount of dust in the atmosphere.
Personal precaution, protective equipment and precautions for fire-fighters	Recommendations on exposure controls / personal protection, see section 8, should be followed during spill clean-up if conditions are dusty.
Environmental precautions	No specific precautions required. Avoid sewer contamination.

Section 7. Handling and storage	
Manual handling	This product is provided in bulk and multiple bag sizes, including 20kg bags which must be handled in accordance with applicable manual handling guidelines and legislation. Use correct posture and lifting techniques. Where possible use mechanical lifting devices or enlist the aid of another person.
Engineering controls	Follow protective controls described in this SDS when handling product. All work should be carried out in a way to minimise dust generation and exposure to dust.

Ventilation	Local exhaust or general ventilation adequate to maintain exposure below appropriate exposure limits

Section 8. Exposure controls/personal protection					
Exposure standards	All occupational exposures to atmospheric contaminants should be kept as low as reasonably practicable and in all cases below the Workplace Exposure Standard (WES)				
Ingredient	Reference	**TWA, 8-hour**		**STEL**	
		ppm	**mg/m³**	**ppm**	**mg/m³**
Crystalline Silica (Quartz) (respirable dust)	SWA (AUS)	--	0.05	--	--
Total dust (any type, or particle size)	SWA (AUS)	--	10.0	--	--
TWA, 8 hour: the time- weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working like. According to current knowledge this concentration should neither impair the health of, nor cause discomfort to, nearly all workers					
Biological Limit Values	No biological limit allocated				
Engineering Controls	Minimise dust generation and airborne dust levels; Use of dust extraction and collection Wetting, ventilation and use of enclosed equipment Work areas to be cleaned regularly				
Equipment repair &/or Maintenance	Where possible vacuum or wash down all gear, equipment or mobile plant prior to maintenance and repair work. If compressed air cleaning cannot be avoided, wear eye and respiratory protection as listed below. Ensure exposures to respirable crystalline silica (quartz) are maintained below TWA.				
Monitoring	A program should be implemented to regularly monitor dust and Respirable Crystalline Silica levels. Results of this testing should be communicated to all affected staff members.				

Personal Protective Equipment	
Respiratory protection ***Reference:*** AS/NZS 1715 & AS/NZS 1716	Where engineering and handling controls are inadequate to minimize dust generation and exposure to respirable crystalline silica below the total dust and respirable crystalline silica TWA, personal respiratory protection may be required. The type of respiratory protection required depends on the concentration of dust and respirable silica in the air, and the frequency and length of exposure time. The amount of exertion required during the work, and personal comfort are other considerations in choice of respirator. A suitable P1 or P2 particulate respirator chosen in accordance the AS/NZS 1715 and AS/NZS 1716 may be sufficient for some situations but where high levels of dust are encountered, more efficient cartridge-type or supplied-air helmets such as Powered Air Purifying Respirators (PAPR) may be necessary. For dust levels approaching or exceeding the WES a particulate respirator providing greater protection should be worn. Procedures for selection and effective use of respirators should be applied and supervised. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly.

Skin protection	Wear comfortable clothing and gloves (standard duty leather or equivalent AS 2161). Wash work clothes after use – see above.
Eye protection	Safety glasses, dust goggles (AS/NZ 1336) or face shield should be worn when excessively dusty conditions are present or anticipated
Other Control Measures	Reduce potential exposure by the use of ventilation and enclosed equipment. Avoid dust generation.
Hygiene Measures	When using do not eat, drink or smoke. Wash hands prior to eating, drinking or using toilet. Avoid eye contact or prolonged skin contact. Eyewash stations and safety showers should be available. Do not contaminate your car or home with dusty clothes and shoes. Do not shake out work clothes prior to laundering.

Section 9. Physical and chemical properties	
Appearance	Product specific with little taste or odour
Colour	White to tan
Melting Point	1680°C (sand)
Vapour Pressure (mm Hg @ 25 °C)	Not applicable
Flammability Limits	Not applicable
Specific Gravity	2.4 – 2.8 (water=1)
Solubility in water	Insoluble but generally dispersible
pH	4 – 8 Approx. (product-specific)
Bulk Density (g/cm^3)	1.4 – 1.6 Approx.
Respirable Quartz (<18 microns) in bulk sample %	<1

Section 10. Stability and reactivity	
Chemical Stability	Material is stable under normal conditions
Conditions to Avoid	Dust generation
Incompatible Materials	Incompatible with strong acids (e.g. hydrofluoric acid)
Hazardous Decomposition Products	Silicon tetrafluoride, oxides of carbon, nitrogen & toxic fumes if heated to decomposition point
Hazardous Reactions	None known

Section 11 Toxicological information	
Health Effects	Sand is an inert product. No specific toxicology data is available, but toxicity is expected to be very low
Acute (short-term)	
Swallowed	Unlikely source of exposure. Mildly abrasive to mouth and throat if swallowed. May cause abdominal discomfort
Eyes	Dust may irritate the eyes, causing redness or irritation and may aggravate pre-existing eye conditions
Skin	Contact may result in skin irritation or redness
Inhalation	Inhalation of dust may irritate the nose, throat or lungs and aggravate pre-existing conditions such as asthma and bronchitis

Chronic (long term)	
Eyes	Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions
Skin	Dust may be mildly irritating and repeated heavy contact may cause drying to the skin due to its physical characteristics, causing a skin rash typically affecting the hands
Inhalation	Repeated exposure to the dust may result in increased nasal and respiratory secretions and coughing. Inflammation of the lining tissue of the respiratory system may follow repeated exposure to high levels of dust with increased risk of bronchitis and pneumonia. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated. Long term occupational over exposure or prolonged inhalation of crystalline silica dust at levels above the TWA carries the risk of causing serious and irreversible lung disease, including bronchitis, silicosis (scarring of the lung), acute and/or accelerated silicosis. It may also increase the risk of other irreversible and serious disorders including scleroderma (a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders. Crystalline silica, the respirable fraction only, has been classified by: **SWA** - as carcinogenic potential for humans, Category 1A **IARC** - as carcinogenic to humans, Group 1.
Symptoms of silicosis	Silicosis symptoms can occur long after exposure has ceased. Symptoms of silicosis may include; coughing, shortness of breath, weight loss, reduction of lung volume, chest pain and heart failure. People with silicosis have an increased risk of pulmonary tuberculosis infection. Acute silicosis may be fatal

Section 12. Ecological information	
Eco-toxicity	Dried silica sand is considered to be an inert product and is not considered to have any short or long term toxicological effects
Persistence and Degradability	Products are not persistent and are non-degradable
Bio-accumulative potential	There is no evidence to suggest bio-accumulation will occur
Mobility	Low mobility in a landfill due to physical nature of product
Dust	Quartz (Crystalline silica) is non-toxic to aquatic and terrestrial organisms. It is insoluble and expected to have low mobility in landfill. It is not biodegradable

Section 13. Disposal consideration	
Disposal	Dried silica sand can be treated as a common waste for disposal in accordance with applicable federal, state, and local laws and regulations. Recycling into construction materials is typically a preferable and more practicable alternative. May be disposed in local landfill, prevent dust generation during disposal, personal precautions should be observed (**Section 8**).

Section 14 Transport information	
Dangerous Goods	Not classified as a Dangerous Good for the purposes of transport by land & rail (ADG Code), air (IATA Code), or sea (IMDG/IMO Code)
UN Number	None allocated
UN Proper shipping Name	None allocated
Class and subsidiary risk	None allocated
Packaging Group	None allocated
Marine Pollutant	No
Special Precautions for User	None allocated
HAZCHEM code	None allocated

Section 15 Regulatory information	
Poisons Schedule	None allocated
Hazardous Classification (SWA & GHS)	Crystalline silica in the form of respirable dust is classified as Hazardous according to Safe Work Australia – Approved criteria for Classifying Hazardous Substances
Dangerous Goods	Not classified as a Dangerous Good for the purposes of transport by land & rail (ADG Code), air (IATA Code), or sea (IMDG/IMO Code)
Health Surveillance	Persons who have potential for exposure above the WES may be required by regulations to have periodic health surveillance including Chest X-ray - see relevant state Government Regulations and SWA (ASCC/NOHSC documentation)

Glossary

ADG – Australian Code for the Transport of Dangerous Goods by Road and Rail

GHS – Globally Harmonized System of Classification and Labelling of Chemicals, United Nations, New York and Geneva, Seventh Edition

IARC – International Agency for Research on Cancer

SWA - Safe Work Australia

TWA - Time-weighted average

WES - Workplace Exposure Standards for Airborne contaminants

References

ASCC - Australian Safety & Compensation Commission
Approved Criteria for Classifying Hazardous Substances

CCAA - Cement Concrete & Aggregates
Guide to preparing SDS for products containing Respirable Crystalline Silica

Safe Silica – IMA Europe
Using crystalline silica safely

Safe Work Australia
Workplace exposure standards for airborne contaminants
Guidance on The Interpretation of Workplace Exposure Standards for Airborne Contaminants
Health monitoring - Guide for Crystalline silica
HCIS – Hazardous Chemical Information system

WorkSafe Victoria
Crystalline Silica: Safety Basics

Poisons Information Centre
13 11 26

Section 16 Other information

This Safety Data Sheet is issued by Burdett Sand Soil & Stone Pty Ltd in good faith and as far as possible in accordance with GHS guidelines. As such, information contained herein must not be altered, deleted or added to. Burdett Sand Soil & Stone Pty Ltd will issue a new SDS when there is a change in product specification and/or GHS guidelines, or at a minimum every 5 years. Burdett Sand Soil & Stone Pty Ltd will not accept responsibility for changes made to the content of this SDS by any person or organisation.

Information contained in this SDS is based on the best available knowledge at the time of preparation. No responsibility can be accepted by us for errors and omissions. The provision of this information should not be construed as a recommendation to use any of our products in violation of patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their purposes and circumstances. Since this material is used under conditions beyond our control, we cannot accept responsibility for any loss or damage caused by persons acting or not acting as a result of this information.

Information specific to Respirable Crystalline Silica:

This SDS is not a substitute for expert advice by a qualified occupational hygienist. As we cannot be responsible for the specific practices and handling measure of each work-site, it should be used in combination with the end user's own assessment considering the likely exposure to workers, the public and other parties.

Each user must equip themselves with adequate knowledge of local and state legislation, council by-laws, planning regulations and any other laws enacted by local planning authorities.

This document was prepared in accordance with the best available information at the time of publication, however It is incumbent upon the end user to ensure they are kept up with the latest scientific knowledge, health & safety advice and which may render this document may not include the best-available information

Updated, applicable legislation and standards that are available after the publication date of this SDS may affect the accuracy, currency or relevance of this document.

Independent advice may recommend strategies and measures that differ from the general guidance provided in this document.

This document should be considered as one piece of a larger puzzle that informs any overall assessment of the risks associated with the use of sand containing inhalable crystalline silica.

Implementation of the updated WES for respirable crystalline was adopted by Victoria in Dec 2019