



MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet meets or exceeds the requirements of the Canadian Controlled Product Regulations (WHMIS)

1. Product and Supplier Identification

PRODUCT

California Tan Nursery Grit
 Target Elite Industrial Sand
 Target Engine Sand
Target Filter Sand and Gravel
 Target Geothermal Sand
 Target Silica Engine Sand
 Target Slurry Filler
 Target Winter White Forestry Sand

PRODUCT USE

Nursery Grit
 Roofing Sand
 Locomotive Traction Sand
 Filter Medium/ Inorganic Filler
 Geothermal Grout Applications
 Locomotive Traction Sand
 Mortar and Coating Filler
 Nursery Grit

Supplier:

Target Products Ltd,
 1080 Bradner Road
 Abbotsford, BC
 V4X 1H8
 Telephone: 1.604.856.7976

24-Hour Emergency Response Telephone for Transport Emergencies ONLY:

+1 (613) 996-6666

2. Composition

Product	Ingredients				
	Crystalline Silica, quartz % (w/w)	Respirable Silica (10µm particle size) % (w/w)	Exposure Limits/ACGIH ¹	LD ₅₀	LC ₅₀
California Tan Nursery Grit	100	< 0.005	TLV-TWA: 0.05 mg/m ³ for respirable crystalline silica dust	>31600 mg/kg (oral/rat)	>2 mg/L (rat/1 hour)
Elite Industrial Sand	60	< 0.005	As above	As above	As above
Engine Sand	60	< 0.005	As above	As above	As above
Filter Sand and Gravel	60	< 0.005	As above	As above	As above
Geothermal Sand	93	<0.005	As Above	As above	As above
Silica Engine Sand	93	< 0.005	As above	As above	As above
Slurry Filler	100	< 0.005	As above	As above	As above
Winter White Forestry Sand	60	< 0.005	As above	As above	As above

1 American Conference of Governmental Industrial Hygienists (ACGIH). Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

3. Hazards Identification

Routes of Entry:

Skin Absorption:	No
Skin Contact:	Yes
Eye Contact:	Yes
Ingestion:	Yes
Inhalation:	Yes

Emergency Overview:

Sand (silicon dioxide) may contain crystalline quartz, which has been classified as a carcinogen by The International Agency for Research on Cancer (IARC). It has been concluded that crystalline silica in the form of quartz or cristobalite from occupational sources should be classified as carcinogenic to humans (Group 1). The major route of entry is inhalation, but the sand in this product is such that dusting of the silica is minimal. Respirable silica dust (10 μ particle size) is less than 0.005%.

Acute Health Effects:

Inhalation:

Inhalation of sand particles may cause irritation to the upper respiratory tract. Exposure may cause sore throat, coughing, sneezing, and the production of phlegm in the throat. Nosebleeds may occur in cases of those with sensitive nose membranes due to abrasion of sensitive tissue.

Skin Contact:

Sand is mildly abrasive to skin, but may aggravate tender skin causing rash, cuts or sores.

Skin Absorption:

Not applicable

Eye Contact:

Contact with the eye will cause tearing and irritation from the "foreign" object in the eye. Rubbing of the eye may cause abrasion of the cornea.

Ingestion:

No evidence of ill effects from ingestion of sand.

Chronic Health Effects:

Excessive inhalation of crystalline silica dust may result in respiratory disease, including silicosis, scarring of lung tissue, cancer, pneumoconiosis, or pulmonary fibrosis. Prolonged contact with sand by sensitive skin may result in skin redness, rash and sores.

Medical Conditions Aggravated by Exposure:

Respiratory problems may be aggravated by pre-existing lung disease such as bronchitis, emphysema, or chronic obstructive pulmonary disease.

4. First Aid Measures

Inhalation:

If irritation causes coughing or phlem, remove to fresh air. Call for medical assistance if coughing doesn't subside.

Skin Contact:

Wash affected area thoroughly. If irritation persists, seek medical attention.

Eye Contact:

Immediately and thoroughly flush eyes with water until the foreign object is flushed out of the eye. If irritation, pain, swelling, or lacrimation exists, get medical attention as soon as possible.

Ingestion:

Ingestion of particulate is not considered to be injurious to health. Give fluids to aid in the passing of the product through the digestive system. Do not give anything by mouth to a convulsing or unconscious person. If patient shows discomfort, get immediate medical attention.

General Comments:

Good personal hygiene is essential. Avoid eating, smoking or drinking in work areas.

5. Fire Fighting Measures

Flammability: No

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Lower Explosive Limit: Not applicable

Upper Explosive Limit: Not applicable

Explosion Data:

Sensitivity to Impact: No

Sensitivity to Static Discharge: No

Hazardous Combustion Products: None known

Conditions to Avoid: None

Extinguishing Media: These materials are not flammable. Use any medium necessary to extinguish surrounding fire.

Fire Fighting Instructions: Evacuate area and fight fire from a safe distance or a protected area. Approach fire from upwind. Firefighters must wear self-contained breathing apparatus and full protective clothing.

6. Accidental Release Measures

Personal Protection:

Wear adequate personal protection to prevent inhalation of dusts, contact with skin or eyes. See Section 8 for specific recommendations.

Environmental Precautions:

Prevent from spilling into waterways, sewers.

Target Products

Cleanup Procedures:

Avoid harmful exposure to dusts. Only adequately trained personnel, wearing properly selected personal protective equipment and clothing described in Section 8, should be involved in the spill response and cleanup.

7. Handling and Storage

Handling Procedures:

Handle bags in a manner that will ensure minimal generation of dusts. Do not breathe dust, which may generate accidentally. Follow safe work procedures and wear the appropriate personal protective equipment specified in Section 8. The workers must be instructed and trained in the safe work procedures.

Do not rely on sight to determine if dust is in the air. Silica may be in the air without a visible dust cloud. If dust cannot be kept below permissible limits, wear a high efficiency respirator approved for silica dust.

Storage:

Store away from incompatible materials. See Section 10.

8. Exposure Controls, Personal Protection

Engineering Controls:

Ensure that sufficient ventilation is available to keep dust below the TLV. If possible, mix this product outdoors. Airborne concentrations should be low, however, provide adequate ventilation to ensure airborne concentrations are kept below applicable regulated exposure limits.

Respiratory Protection:

Respirators must be NIOSH approved and properly selected, maintained and used when working with this product. Knowledge of respiratory hazards and respiratory protection is essential to ensure appropriate selection of respirators. Use an approved high efficiency NIOSH dust respirator with a minimum N95 rating.

Skin Protection:

Wear clothing to prevent contact with skin.

Eye and Face Protection:

Wear safety glasses to prevent contact with eyes and make immediately available appropriate emergency eyewashing equipment (e.g. portable or plumbed) capable of flushing the eyes for at least 15 minutes.

9. Physical and Chemical Properties

	Physical State	Appearance	Odour	Odour Threshold	pH (supernatant)	Vapour Pressure	Vapour Density (Air=1)	Solubility in water	Melting Point	Boiling Point	Specific Gravity (Water=1)	Coefficient of water/oil Distribution	Evaporation Rate (Butyl Acetate=1)
California Tan Nursery Grit	Solid	Tan coloured granules crushed or ground	None	None	6-7	N. App	N. App	No	2230 °C	2230 °C	2.65	N. App	N. App
Elite Industrial Sand	Solid	Grey to yellow crystals	None	None	6-7	N. App	N. App	No	1610 °C	2230 °C	2.65	N. App	N. App
Engine Sand	Solid	Grey to yellow crystals	None	None	6-7	N. App	N. App	No	1610 °C	2230 °C	2.65	N. App	N. App
Filter Sand and Gravel	Solid	Beige to tan crystals	None	None	6-7	N. App	N. App	No	2230 °C	2230 °C	2.65	N. App	N. App
Geothermal Sand	Solid	Beige to tan crystals	None	None	6-7	N. App	N. App	No	2230 °C	2230 °C	2.65	N. App	N. App
Silica Engine Sand	Solid	White to yellow crystals or dust	None	None	6-7	N. App	N. App	No	1750 °C	2230 °C	2.65	N. App	N. App
Slurry Filler	Solid	White to yellow crystals	None	None	6-7	N. App	N. App	No	1750 °C	2230 °C	2.65	N. App	N. App
Winter White Forestry Sand	Solid	White to slightly grey crystals	None	None	7	N. App	N. App	No	1610 °C	2230 °C	2.65	N. App	N. App

10. Stability and Reactivity

Chemical Stability: This product is stable.

Hazardous Polymerization: Will not occur.

Incompatibility: Yes. Contact with powerful oxidizing agents such as fluorine, chlorine trifluoride and oxygen difluoride may cause exothermic reactions resulting in fires.

Reactivity: Yes. Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride.

Hazardous Decomposition Products: None

11. Toxicological Information

Effects of Acute Exposure: See Section 3

Effects of Chronic Exposure: See Section 3

Irritancy: Yes. See Section 3.

Skin Sensitization: None reported

Respiratory Sensitization: None reported

Neurotoxicity: No

Carcinogenicity: Crystalline silica is listed by IARC

Embryotoxicity: No

Teratogenicity: No

Reproductive Toxicity: No

Mutagenicity: No

Target Products

Synergistic Products: None reported

12. Ecological Information

Environmental Toxicity: No environmental impact for uncontaminated sand.

Biodegradability: No

13. Disposal Considerations

Review federal, provincial or state, and local government requirements prior to disposal. Store material for disposal as indicated in Storage Conditions. Disposal by controlled incineration may be acceptable.

14. Transport Information

Canadian Transportation of Dangerous Goods Regulations: Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:

CEPA, DOMESTIC SUBSTANCES LIST: Listed

WHMIS CLASSIFICATION: D2A

16. Other Information

Original Preparation Date: June 23, 2004

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Disclaimer: This Material Safety Data Sheet was prepared in accordance with criteria and requirements of the Hazardous Products Act and the Controlled Products Regulations using information provided by the manufacturer and other sources including CCINFO (Chemical Information published by the Canadian Centre for Occupational Health and Safety). The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. TARGET PRODUCTS LTD. expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this MSDS does not apply to use with any other product or in any other process.

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