



# 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:** Target Aluminum Oxide

**Product Use:** Abrasive Blasting

**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	Fumed Silica, Amorphous	Respirable Silica (10µm particle size)	Aluminum Oxide	Titanium Dioxide	Iron Oxide
	% (w/w)	% (w/w)	% (w/w)	% (w/w)	% (w/w)	% (w/w)
Brown Fused Aluminum Oxide	-	0.2 - 1	< 0.005	93 - 97	1.5 – 3.8	0.01 - 1

Component	Exposure Limits/ACGIH <sup>1</sup>	LD <sub>50</sub>	LC <sub>50</sub>
Crystalline Silica CAS No 14464-46-1	TLV-TWA: 0.05 mg/m <sup>3</sup> for respirable crystalline silica dust	>31600 mg/kg (rat/oral)	>2 mg/L (rat/1 hour)
Fumed Silica CAS No 7631-86-9	TLV-TWA: 6 mg/m <sup>3</sup> for inhalable particulate	N/Established	N/Established
Aluminum Oxide CAS No 1344-28-1	TLV-TWA: 10 mg/m <sup>3</sup> for inhalable particulate	N/Established	N/Established
Titanium Dioxide CAS No 13463-67-7	TLV-TWA: 10 mg/m <sup>3</sup> for inhalable particulate	N/Established	N/Established
Iron Oxide CAS No 1309-37-1	TLV-TWA: 5 mg/m <sup>3</sup> for inhalable particulate	N/Established	N/Established

- 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:**

When abrasive blasting, the abrasive is being used to remove and clean a surface. The substance that has been removed may contain materials that represent health hazards that cannot be addressed in the Material Safety Data Sheet. The employer must ensure that a risk assessment is done before any abrasive blasting activity which may cause release of a harmful level of an air contaminant from a surface or coating containing a toxic heavy metal or asbestos. This blasting abrasive must NOT be reused unless it is being used in a fully enclosed, vented cabinet designed to re-circulate the abrasive material.

**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:**

This product 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 abrasive particulate dust may result in respiratory disease, including silicosis, scarring of lung tissue, cancer, pneumoconiosis, or pulmonary fibrosis. Prolonged contact with abrasive 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 phlegm, 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. At high temperatures small amounts of fume comprised of the following elements may evolve; iron, aluminum, or titanium. 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.

### Cleanup Procedures:

Restrict access to area until completion of cleanup. 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. Abrasive particulate 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 abrasive dust.

Used abrasive blasting materials must be removed from the work area at the end of the work shift and dust collection must be used to minimize airborne contaminant. Used abrasive blasting materials must not be dry-swept.

### Storage:

Store away from incompatible materials. See Section 10.

## 8. Exposure Controls, Personal Protection

### Engineering Controls:

Engineering controls such as an enclosure or local exhaust ventilation with dust collection must be used to maintain airborne contaminations levels below the exposure limits, where practicable.

When an abrasive blasting operation is conducted inside an enclosure or cabinet, the enclosure or cabinet must have exhaust ventilation that maintains air pressure below the air pressure outside the enclosure or cabinet, so as to prevent the escape of air contaminants to other work areas, and minimize worker exposure inside the enclosure.

When abrasive blasting is conducted outside a structure, the process must be restricted to a work zone which is identified by signs or similar means as being contaminated. Only properly protected workers, who are necessary to perform the work, are permitted inside an enclosure or a restricted work zone where abrasive blasting is being conducted.

The operating controls for an abrasive blasting machine or jetting gun must be located near the nozzle in a position where the operator's hands will be when using the device.

### 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

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respirator with a minimum N95 rating. In selecting the appropriate respirator must reflect the contaminant likely to be present in the spent sand

### 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)
<b>Brown Fused Aluminum Oxide</b>	Solid	White to yellow crystals or dust	None	None	6-7	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:

Product components may react with mineral acids such as hydrofluoric acid.

**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

### Synergistic Products:

None reported

## 12. Ecological Information

**Environmental Toxicity:** No environmental impact for uncontaminated sand. Determination of sandblasting contamination is required to determine environmental impact.

**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:** July 05, 2005

**Prepared by:** Kel-Ex Agencies Ltd., P.O. Box 52201, Lynnmour RPO, North Vancouver, BC, Canada, V7J 3V5

**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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END OF MATERIAL SAFETY DATA SHEET