

## 1. Product and Company Identification

<b>Product identifier</b>	<b>Birm®</b>
<b>Other means of identification</b>	Not available
<b>Recommended use</b>	Water Treatment Filter Media
<b>Recommended restrictions</b>	Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.
<b>Manufacturer</b>	Pro Products LLC 7201 Engle Road Fort Wayne, IN 46804-5875 US Phone: 260-483-2519 Emergency Phone: 1-800-424-9300 (CHEMTREC)

## 2. Hazards Identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Harmful if swallowed. May cause cancer. Causes damage to organs through prolonged or repeated exposure.

**Precautionary statement**

<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors.
<b>Response</b>	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If exposed or concerned: Get medical advice/attention. Specific treatment (see information on this label).
<b>Storage</b>	Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** 32% of the mixture consists of component(s) of unknown acute oral toxicity.

## 3. Composition/Information on Ingredients

**Mixture**

Chemical name	Common name and synonyms	CAS number	%
Crystalline silica		14808-60-7	40-70
Manganese oxide (MnO <sub>2</sub> )		1313-13-9	10-30

**Composition comments** US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

---

## 4. First Aid Measures

---

<b>Inhalation</b>	If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor/.
<b>Skin contact</b>	Brush away excess of dry material. Flush with water. Wash with soap and water. Obtain medical attention if irritation persists. Specific treatment (see product label).
<b>Eye contact</b>	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth.
<b>Most important symptoms/effects, acute and delayed</b>	Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. In case of shortness of breath, give oxygen. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

---

## 5. Fire Fighting Measures

---

<b>Suitable extinguishing media</b>	Treat for surrounding material.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Decomposition releases oxygen which may intensify fire. Firefighters should wear a self-contained breathing apparatus.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire-fighting equipment/instructions</b>	In the event of fire, cool tanks with water spray. Cool containers with flooding quantities of water until well after fire is out.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of aluminum. Oxides of manganese. Oxygen.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available.
<b>Sensitivity to static discharge</b>	Not available.

---

## 6. Accidental Release Measures

---

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground. Prevent entry into waterways, sewers, basements or confined areas.

---

## 7. Handling and Storage

---

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only with adequate ventilation. Keep formation of airborne dusts to a minimum. Do not breathe dust. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Wash thoroughly after handling. Keep container tightly closed.
<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children.

---

## 8. Exposure Controls/Personal Protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	Ceiling	5 mg/m <sup>3</sup>

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.3 mg/m <sup>3</sup>	Total dust.
		0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	TWA	0.1 mg/m <sup>3</sup>	Inhalable fraction.
		0.02 mg/m <sup>3</sup>	Respirable fraction.

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	STEL	3 mg/m <sup>3</sup>	Fume.
	TWA	1 mg/m <sup>3</sup>	Fume.

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear safety glasses with side shields (or goggles).

#### Skin protection

##### Hand protection

Rubber gloves. Confirm with a reputable supplier first.

##### Other

As required by employer code.

#### Respiratory protection

Wear positive pressure self-contained breathing apparatus (SCBA). Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

#### Thermal hazards

Not applicable.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and Chemical Properties

Appearance	Granular.
Physical state	Solid.
Form	Powder
Color	Brown to black
Odor	None
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	Not applicable
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	2 - 2.5 (water=1)

<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Flash point</b>	None
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	None
<b>Flammability limit - upper (%)</b>	None
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	Insoluble
<b>Auto-ignition temperature</b>	None
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

---

## 10. Stability and Reactivity

---

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Do not mix with other chemicals.
<b>Incompatible materials</b>	Powerful oxidizers. Acids. Chlorine. Reducing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of aluminum. Oxides of manganese. Oxygen.

---

## 11. Toxicological Information

---

<b>Routes of exposure</b>	Eye, Skin contact, Inhalation, Ingestion.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	Harmful if swallowed.
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

<b>Acute toxicity</b>	Harmful if swallowed.
-----------------------	-----------------------

Components	Species	Test Results
Crystalline silica (CAS 14808-60-7)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	500 mg/kg
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	2.8 - 43 mg/m <sup>3</sup>

Components	Species	Test Results
Oral LD50	Rat	> 3478 mg/kg
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.	
<b>Exposure minutes</b>	Not available.	
<b>Erythema value</b>	Not available.	
<b>Oedema value</b>	Not available.	
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.	
<b>Corneal opacity value</b>	Not available.	
<b>Iris lesion value</b>	Not available.	
<b>Conjunctival reddening value</b>	Not available.	
<b>Conjunctival oedema value</b>	Not available.	
<b>Recover days</b>	Not available.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not available.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	Not classified.	
<b>Mutagenicity</b>	Not classified.	
<b>Carcinogenicity</b>	May cause cancer.	
<b>ACGIH Carcinogens</b>		
Crystalline silica (CAS 14808-60-7)	A2 Suspected human carcinogen.	
Manganese oxide (MnO <sub>2</sub> ) (CAS 1313-13-9)	A4 Not classifiable as a human carcinogen.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Crystalline silica (CAS 14808-60-7)	Volume 68, Volume 100C 1 Carcinogenic to humans.	
<b>US - California Proposition 65 - CRT: Listed date/Carcinogenic substance</b>		
Crystalline silica (CAS 14808-60-7)	Carcinogenic.	
<b>US NTP Report on Carcinogens: Known carcinogen</b>		
Crystalline silica (CAS 14808-60-7)	Known To Be Human Carcinogen.	
<b>Reproductive toxicity</b>	Not classified.	
<b>Teratogenicity</b>	Not classified.	
<b>Specific target organ toxicity - single exposure</b>	Not classified.	
<b>Specific target organ toxicity - repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.	
<b>Aspiration hazard</b>	Not available.	
<b>Chronic effects</b>	Prolonged or repeated exposure to fine airborne crystalline silica dust may cause severe scarring of the lungs, a disease called silicosis. Early symptoms of silicosis include cough, mucous production and shortness of breath upon exertion.	
<b>Further information</b>	Not available.	
<b>Name of Toxicologically Synergistic Products</b>	Not available.	

## 12. Ecological Information

<b>Ecotoxicity</b>	No data available.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Mobility in general</b>	Not available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal Considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

<b>General</b>	Canada: TDG Proof of Classification: In accordance with Part 2.2.1 (SOR/2014-152) of the Transportation of Dangerous Goods Regulations, we certify that the classification of this product is correct as of the SDS date of issue. If applicable, the technical name and the classification of the product will appear below.
<b>U.S. Department of Transportation (DOT)</b>	Not regulated as dangerous goods.
<b>Transportation of Dangerous Goods (TDG - Canada)</b>	Not regulated as dangerous goods.

### 15. Regulatory Information

<b>Canadian federal regulations</b>	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
-------------------------------------	--

**Canada DSL Challenge Substances: Listed substance**

Crystalline silica (CAS 14808-60-7) Listed.

**Canada WHMIS Ingredient Disclosure: Threshold limits**

Crystalline silica (CAS 14808-60-7) 1 %

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) 1 %

<b>WHMIS status</b>	Controlled
<b>WHMIS classification</b>	Class D - Division 2A
<b>WHMIS labeling</b>	



<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
-------------------------------	--

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) 1.0 % N450

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) Listed. N450

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) Listed.

**US CAA Section 112(i) High-Risk Hazardous Air Pollutants (HAPs): Weight factor**

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) 10

**US CAA Section 112(i) High-Risk Hazardous Air Pollutants (HAPs): Listed substance**

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) Listed.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese oxide (MnO<sub>2</sub>) (CAS 1313-13-9) Listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Manganese oxide (MnO2)	1313-13-9	10-30

**Other federal regulations**

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Not regulated.

**US state regulations**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Hazardous Substances (Director's): Listed substance**

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Crystalline silica (CAS 14808-60-7) Listed.

**US - Illinois Chemical Safety Act: Listed substance**

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US - Louisiana Spill Reporting List: Reportable quantity (total mass into atmosphere)**

Manganese oxide (MnO2) (CAS 1313-13-9) 100 LBS

**US - Louisiana Spill Reporting: Listed substance**

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US - Minnesota Haz Subs: Listed substance**

Crystalline silica (CAS 14808-60-7) Listed.

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US - New Jersey RTK - Substances: Listed substance**

Crystalline silica (CAS 14808-60-7) Listed.

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US - North Carolina Toxic Air Pollutants: Listed substance**

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US - Texas Effects Screening Levels: Listed substance**

Crystalline silica (CAS 14808-60-7) Listed.

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**US. Massachusetts RTK - Substance List**

Crystalline silica (CAS 14808-60-7) Listed.

**US. Pennsylvania RTK - Hazardous Substances**

Crystalline silica (CAS 14808-60-7) Listed.

**US. Rhode Island RTK**

Manganese oxide (MnO2) (CAS 1313-13-9) Listed.

**Inventory status**

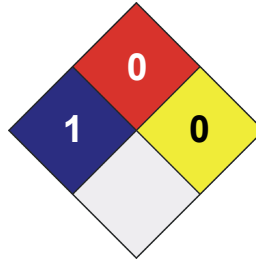
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

## 16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	* 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



### Disclaimer

The data contained in this material safety data sheet was obtained from sources that were technically accurate, reliable, and state of the art when this document was prepared. If data was unavailable to complete certain sections, the absence of that data is identified in this document. Because the supplier cannot know the exact circumstances during actual use of this product, other hazards, exposure scenarios, disposal considerations, and regulations may apply and it is the responsibility of the user to read and understand the product label and this document before use. Do not use the product for purposes other than those stated in Section 1.

### Issue date

18-August-2015

### Effective date

17-April-2015

### Expiry date

17-April-2018

### Further information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.

### Prepared by

Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

### Other information

This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This SDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

Redbook revision # 1, 6/22/12

Birm® is a federally registered trademark of Clack Corporation