

# SAFETY DATA SHEET

according to 29 CFR 1910.1200 and ANSI standard Z400.1-2010



## Vitrified Bonded Abrasives

Product number 012

Revision date: Oct/17/2017  
Version: 5

Language: en-US,CA

Date of print: Oct/8/2019  
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### 1. Product and company identification

#### Product identifier

Trade name: Vitrified Bonded Abrasives  
This safety data sheet pertains to the following products:  
Mounted Points, vitrified bond  
Floor and Hand Rubs, vitrified bond  
Bench grinding wheels, vitrified bond  
Dressing stones, vitrified bond

#### Relevant identified uses of the substance or mixture and uses advised against

General use: Fine grinding and finishing of different kinds of materials.  
For industrial purposes only

#### Details of the supplier of the safety data sheet

Company name:  
PFERD INC.  
Street/POB-No.: 9201 W. Heather Ave.  
Postal Code, city: Milwaukee, WI 53224,  
USA  
WWW: [www.pferdusa.com](http://www.pferdusa.com)  
E-mail: [sales@pferdusa.com](mailto:sales@pferdusa.com)  
Telephone: 1-800-342-9015  
Telefax: 262-255-2840  
Department responsible for information:  
1-800-342-9015

PFERD CANADA INC.  
Street/POB-No.: 5570 McAdam Road  
Postal Code, city: Mississauga, Ontario L4Z 1P1,  
Canada  
WWW: [www.pferdusa.com](http://www.pferdusa.com)  
E-mail: [sales@pferdcanada.ca](mailto:sales@pferdcanada.ca)  
Telephone: (905) 501-1555  
Telefax: (905) 501-1554  
Department responsible for information: 1-866-245-1555

#### Emergency phone number

USA/Canada: 1-800-255-3924

### 2. Hazards identification

#### Emergency overview

Appearance: Form: solid  
Color: varying colors  
Odor: No data available  
Classification: Carcinogenicity - Category 1A;

Hazard symbols:



Signal word: **Danger**  
Hazard statements: May cause cancer.

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### Precautionary statements:

Obtain special instructions before use.  
Wear protective gloves/protective clothing/eye protection.  
IF exposed or concerned: Get medical advice/attention.  
Store locked up.

### Additional information

Dispose of contents/container to hazardous or special waste collection point.  
The hazard identification is based on a formalistic procedure as the hazard statements of the ingredients are summarized under section 3. This does not correspond to the hazardousness of the product itself. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being ground. Most of the dust generated during grinding is from the base material being ground and the potential hazard from this exposure must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

### Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and WHMIS in Canada.

### Hazards not otherwise classified

Mechanical processing can produce particles and dust.  
Inhalation of dust may cause irritation of the respiratory system.  
The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.  
May cause sensitisation especially in sensitive humans.  
see section 11: Toxicological information

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### 3. Composition / Information on ingredients

Relevant ingredients:

CAS No.	Designation	Content	Classification
CAS 1344-28-1	Aluminium oxide	< 98 %	not classified
CAS 409-21-2	Silicon carbide	< 98 %	not classified
CAS 60676-86-0	amorphous silica	< 50 %	not classified
CAS 14808-60-7	Quartz (SiO <sub>2</sub> )	< 5 %	Carcinogenicity - Category 1A.
CAS 13463-67-7	Titanium dioxide	< 5 %	Carcinogenicity - Category 2.
CAS 1309-37-1	Diiron trioxide	< 5 %	not classified
CAS -	Micro wax	< 3 %	not classified
CAS -	Paraffin wax	< 3 %	not classified
CAS 1308-38-9	Chromium (III) oxide	< 2 %	not classified
CAS 1312-81-8	Lanthanum oxide	< 1 %	not classified
CAS 7631-86-9	Silicon dioxide	< 1 %	not classified
CAS 1309-48-4	Magnesium oxide	< 0.5 %	not classified
CAS 1314-36-9	yttrium oxide	< 0.5 %	not classified
CAS 1305-78-8	Calcium oxide	< 0.5 %	Skin Irritation - Category 2. Eye Damage - Category 1. Specific Target Organ Toxicity (Single Exposure) - Category 3.

Additional information: The ingredients are embedded in the product.

### 4. First aid measures

In case of inhalation: Provide fresh air. If you feel unwell, seek medical advice.  
Following skin contact: Remove residues with soap and water. In case of skin reactions, consult a physician.  
After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.  
After swallowing: Rinse mouth with water. Give water to drink in small sips. If you feel unwell, seek medical advice.

#### Most important symptoms/effects, acute and delayed

Inhalation of dust may cause irritation of the respiratory system.

#### Information to physician

Treat symptomatically.

### 5. Fire fighting measures

Flash point/flash point range:

No data available

Auto-ignition temperature: No data available

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Suitable extinguishing media:

Product is non-combustible. Extinguishing materials should therefore be selected according to surroundings.

### Specific hazards arising from the chemical

On heating or in case of fire toxic gases may form.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information:

Do not allow fire water to penetrate into surface or ground water.

## 6. Accidental release measures

Personal precautions:

For mechanical processing: Avoid generation of dust. Do not inhale substance.  
In case of heating: Development of gas/vapor possible.  
Provide adequate ventilation. Wear appropriate protective equipment.  
Avoid contact with the substance. Keep unprotected people away.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.  
In case of release, notify competent authorities.

Methods for clean-up:

Take up mechanically, placing in appropriate containers for disposal.

## 7. Handling and storage

### Handling

Advices on safe handling:

Provide adequate ventilation, and local exhaust as needed. Avoid generation of dust. In case of heating: Development of gas/vapor possible. Do not inhale substance. Wear appropriate protective equipment. Avoid contact with the substance. Obtain special instructions before use.

### Storage

Requirements for storerooms and containers:

Keep container tightly closed and dry.  
Keep in a cool, well-ventilated place.

Hints on joint storage:

Do not store together with oxidizing agents or acids.  
Do not store together with food.

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### 8. Exposure controls / personal protection

#### Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
1344-28-1	Aluminium oxide	Canada, Alberta: OEL 8 hour	10 mg/m <sup>3</sup>
		Canada, Québec: VEMP	10 mg/m <sup>3</sup> (inhalable fraction)
		USA: OSHA: TWA	15 mg/m <sup>3</sup> (inhalable fraction)
		USA: OSHA: TWA	5 mg/m <sup>3</sup> (respirable fraction)
409-21-2	Silicon carbide	Canada, Alberta: OEL 8 hour	0.1 fibers/cm <sup>3</sup> (fibers, inhalable fraction)
		Canada, Alberta: OEL 8 hour	10 mg/m <sup>3</sup> (Contains no fibers, inhalable fraction)
		Canada, Alberta: OEL 8 hour	3 mg/m <sup>3</sup> (Contains no fibers, respirable fraction)
		Canada, BC: OEL TWA	0.1 fibers/cm <sup>3</sup> (fibers, inhalable fraction)
		Canada, BC: OEL TWA	10 mg/m <sup>3</sup> (Contains no fibers, inhalable fraction)
		Canada, BC: OEL TWA	3 mg/m <sup>3</sup> (Contains no fibers, respirable fraction)
		Canada, Ontario: OEL TWA	0.1 fibers/cm <sup>3</sup> (fibers, inhalable fraction)
		Canada, Ontario: OEL TWA	10 mg/m <sup>3</sup> (Contains no fibers, inhalable fraction)
		Canada, Ontario: OEL TWA	3 mg/m <sup>3</sup> (Contains no fibers, respirable fraction)
		Canada, Québec: VEMP	10 mg/m <sup>3</sup> (Contains no fibers, inhalable fraction)
		USA: ACGIH: TWA	0.1 fibers/cm <sup>3</sup> (fibers, inhalable fraction)
		USA: ACGIH: TWA	10 mg/m <sup>3</sup> (inhalable fraction)
		USA: ACGIH: TWA	3 mg/m <sup>3</sup> (respirable fraction)
		USA: NIOSH: TWA	10 mg/m <sup>3</sup> (inhalable fraction)
USA: NIOSH: TWA	5 mg/m <sup>3</sup> (respirable fraction)		
60676-86-0	amorphous silica	Canada, Ontario: OEL TWA	0.1 mg/m <sup>3</sup> (respirable fraction)
		Canada, Québec: VEMP	0.1 mg/m <sup>3</sup> (respirable fraction)

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CAS No.	Designation	Type	Limit value
14808-60-7	Quartz (SiO <sub>2</sub> )	Canada, Alberta: OEL 8 hour	0.025 mg/m <sup>3</sup>
		Canada, BC: OEL TWA	0.025 mg/m <sup>3</sup>
		Canada, Ontario: OEL TWA	0.1 mg/m <sup>3</sup> (respirable fraction)
		Canada, Québec: VEMP	0.1 mg/m <sup>3</sup> (respirable fraction)
		USA: ACGIH: TWA	0.025 mg/m <sup>3</sup> (respirable fraction)
		USA: NIOSH: TWA	0.05 mg/m <sup>3</sup> (respirable fraction)
		USA: OSHA: TWA	10 mg/m <sup>3</sup> % SiO <sub>2</sub> + 2 (respirable fraction)
		USA: OSHA: TWA	250 mppcf/%SiO <sub>2</sub> +5 (fine dust)
		USA: OSHA: TWA	30 mg/m <sup>3</sup> % SiO <sub>2</sub> + 2 (inhalable fraction)
		13463-67-7	Titanium dioxide
Canada, BC: OEL TWA	10 mg/m <sup>3</sup>		
Canada, BC: OEL TWA	3 mg/m <sup>3</sup> respirable fraction		
Canada, Québec: VEMP	10 mg/m <sup>3</sup> (inhalable fraction)		
USA: ACGIH: TWA	10 mg/m <sup>3</sup>		
USA: OSHA: TWA	15 mg/m <sup>3</sup>		
1309-37-1	Diiron trioxide	Canada, Alberta: OEL 8 hour	5 mg/m <sup>3</sup> (respirable fraction)
		Canada, BC: OEL STEL	10 mg/m <sup>3</sup> (Smoke, calculated as Fe)
		Canada, BC: OEL TWA	10 mg/m <sup>3</sup> (oxide, red)
		Canada, BC: OEL TWA	3 mg/m <sup>3</sup> (oxide, red) respirable fraction
		Canada, BC: OEL TWA	5 mg/m <sup>3</sup> (oxide dust)
		Canada, BC: OEL TWA	5 mg/m <sup>3</sup> (Smoke, calculated as Fe)
		Canada, Québec: VEMP	10 mg/m <sup>3</sup> (red)
		Canada, Québec: VEMP	5 mg/m <sup>3</sup>
		USA: ACGIH: TWA	5 mg/m <sup>3</sup> (respirable fraction)
		USA: OSHA: TWA	10 mg/m <sup>3</sup> (Iron oxide, fume; calculated as Fe)
1308-38-9	Chromium (III) oxide	USA: OSHA: TWA	15 mg/m <sup>3</sup> (inhalable fraction, red)
		USA: OSHA: TWA	5 mg/m <sup>3</sup> (red, respirable fraction)
		Canada, Alberta: OEL 8 hour	0.5 mg/m <sup>3</sup>
		Canada, BC: OEL TWA	0.5 mg/m <sup>3</sup>
		Canada, Québec: VEMP	0.5 mg/m <sup>3</sup>
		USA: ACGIH: TWA	0.5 mg/m <sup>3</sup> (inhalable fraction)
7631-86-9	Silicon dioxide	USA: NIOSH: TWA	0.5 mg/m <sup>3</sup>
		USA: OSHA: TWA	0.5 mg/m <sup>3</sup>
		USA: OSHA: TWA	6 mg/m <sup>3</sup>
		USA: OSHA: TWA	20 mppcf 80 mg/m <sup>3</sup> (total dust)

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CAS No.	Designation	Type	Limit value
1309-48-4	Magnesium oxide	Canada, Alberta: OEL 8 hour	10 mg/m <sup>3</sup>
		Canada, BC: OEL STEL	10 mg/m <sup>3</sup> (respirable fraction, Smoke and Dusts)
		Canada, BC: OEL TWA	3 mg/m <sup>3</sup> (respirable fraction, Smoke and Dusts)
		Canada, Québec: VEMP	10 mg/m <sup>3</sup>
		USA: ACGIH: TWA	10 mg/m <sup>3</sup> (inhalable fraction)
		USA: OSHA: TWA	15 mg/m <sup>3</sup>
1305-78-8	Calcium oxide	Canada, Alberta: OEL 8 hour	2 mg/m <sup>3</sup>
		Canada, BC: OEL TWA	2 mg/m <sup>3</sup>
		Canada, Québec: VEMP	2 mg/m <sup>3</sup>
		USA: ACGIH: TWA	2 mg/m <sup>3</sup>
		USA: NIOSH: TWA	2 mg/m <sup>3</sup>
		USA: OSHA: TWA	5 mg/m <sup>3</sup>

### Engineering controls

In the case of the formation of dust: Provide good ventilation and/or an exhaust system in the work area.

See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection: For mechanical processing: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: For mechanical processing: Wear suitable protective clothing and shoes.  
For mechanical processing: Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Respiratory protection: In case of dust formation:  
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations:

For mechanical processing: Do not inhale substance.  
Avoid contact with skin and eyes.  
When using do not eat, drink or smoke. Change contaminated clothing.  
Wash hands before breaks and after work.  
Work place should be equipped with a shower and an eye rinsing apparatus. Obtain special instructions before use.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Appearance: Form: solid  
Color: varying colors

Odor: No data available

Odor threshold: No data available

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pH value:	No data available
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point/flash point range:	No data available
Evaporation rate:	No data available
Flammability:	No data available
Explosion limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Density:	No data available
Solubility:	No data available
Partition coefficient: n-octanol/water:	No data available
Auto-ignition temperature:	No data available
Thermal decomposition:	No data available
Additional information:	No data available

### 10. Stability and reactivity

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions:  
No hazardous reaction when handled and stored according to provisions.

Conditions to avoid: No data available

Incompatible materials: No data available

Hazardous decomposition products:  
On heating or in case of fire toxic gases may form.

Thermal decomposition: No data available



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## 11. Toxicological information

### Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.  
Acute toxicity (oral): Lack of data.  
Acute toxicity (dermal): Lack of data.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation: Lack of data.  
Serious eye damage/irritation: Lack of data.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Lack of data.  
Germ cell mutagenicity/Genotoxicity: Lack of data.  
Carcinogenicity: Carcinogenicity - Category 1A = May cause cancer.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure): Lack of data.  
Specific target organ toxicity (repeated exposure): Lack of data.  
Aspiration hazard: Lack of data.

Other information: Chronic toxicity carcinogenic effect:  
Information about Titanium dioxide:  
IARC Rating: Group 2B  
OSHA Carcinogen: not listed  
NTP Rating: not listed  
Information about Diiron trioxide:  
IARC Rating: Group 3  
OSHA Carcinogen: not listed  
NTP Rating: not listed  
Information about silicon dioxide:  
IARC Rating: Group 3  
OSHA Carcinogen: not listed  
NTP Rating: not listed  
Information about Quartz (SiO<sub>2</sub>):  
IARC Rating: Group 1  
OSHA Carcinogen: not listed  
NTP Rating: listed

### Symptoms

In case of inhalation: Inhalation of dust may cause irritation of the respiratory system.  
Irritation of nose, throat, lung.

## 12. Ecological information

### Ecotoxicity

Further details: No data available

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### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

### Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains.

## 13. Disposal considerations

### Product

Recommendation: Dispose of waste according to applicable legislation.

### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Packing can be recycled or disposed of.

## 14. Transport information

### USA: Department of Transportation (DOT)

Proper shipping name: Not restricted

### Canada: Transportation of Dangerous Goods (TDG)

Shipping name: Not restricted

### Sea transport (IMDG)

Proper shipping name: Not restricted

Marine pollutant: no

### Air transport (IATA)

Proper shipping name: Not restricted

### Further information

No dangerous good in sense of these transport regulations.

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### 15. Regulatory information

#### National regulations - U.S. Federal Regulations

Product:	This product is an article as defined by TSCA regulations, and is exempt from TSCA inventory listing requirements.
Aluminium oxide:	Other Environmental Laws: SARA Title III Section 313, Toxic Release: Conc. 1.0% / Threshold Standard NIOSH Recommendations: Occupational Health Guideline: 0021
Silicon carbide:	NIOSH Recommendations: Occupational Health Guideline: 0555
Quartz (SiO <sub>2</sub> ):	Carcinogen Status: IARC Rating: Group 1 OSHA Carcinogen: not listed NTP Rating: listed NIOSH Recommendations: Occupational Health Guideline: 0553
Titanium dioxide:	Carcinogen Status: IARC Rating: Group 2B OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0617
Diiron trioxide:	Carcinogen Status: IARC Rating: Group 3 OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0344
Silicon dioxide:	Carcinogen Status: IARC Rating: Group 3 OSHA Carcinogen: not listed NTP Rating: not listed NIOSH Recommendations: Occupational Health Guideline: 0552
Magnesium oxide:	NIOSH Recommendations: Occupational Health Guideline: 0374
Calcium oxide:	NIOSH Recommendations: Occupational Health Guideline: 0093

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### National regulations - U.S. State Regulations

Aluminium oxide: Delaware Air Quality Management List:  
DRQ: 100 - RQ State: State requirement differs from Federal  
Massachusetts Haz. Substance codes: F9  
Minnesota Haz. Substance:  
Codes: A - Ratings: 10.16 - Status: Title III. TRI.  
New Jersey RTK Hazardous Substance:  
DOT: - - Sub No.: 2891 - TPQ: -  
Pennsylvania Haz. Substance code: E  
Washington Air Contaminant:  
TWA: 10 mg

Quartz (SiO<sub>2</sub>): California Proposition 65: cancer

Titanium dioxide: California Proposition 65: cancer

Diiron trioxide: Idaho Air Pollutant List:  
Title 585 -- AAC: 0.25 -- EL: 0.333 -- WEL: 5  
Title 586 -  
Massachusetts Haz. Substance codes: 2  
Pennsylvania Haz. Substance code: -  
Washington Air Contaminant:  
TWA: 5 mg

### National regulations - Canada

No data available

## 16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)  
Fire: 0 (Minimal)  
Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight) - Chronic effects  
Flammability: 0 (Minimal)  
Physical Hazard: 0 (Minimal)  
Personal Protection: X = Consult your supervisor

HEALTH	*	1
FLAMMABILITY		0
PHYSICAL HAZARD		0
X		

Reason of change: Changes in section 1: emergency phone number  
Date of first version: Jan/13/2016

### Department issuing data sheet

Contact person: see section 1: Department responsible for information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products.