



## Safety Data Sheet

### Section 1: Identification

**Product Name** • Green Foundry Sand

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

**Recommended use** • No data available

**Details of the supplier of the safety data sheet**

**Manufacturer** • Waupaca Foundry, Inc.  
1955 Brunner Drive  
PO Box 249  
Waupaca, WI 54981  
United States  
www.waupacafoundry.com

**Telephone (General)** • 715-258-6611

**Emergency telephone number**

**Manufacturer** • 715-258-6611

### Section 2: Hazard Identification

**United States (US)**

According to: OSHA 29 CFR 1910.1200 HCS

**Classification of the substance or mixture**

**OSHA HCS 2012** • Carcinogenicity 1A  
Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation  
Specific Target Organ Toxicity Single Exposure 1  
Specific Target Organ Toxicity Repeated Exposure 1

**Label elements**

**OSHA HCS 2012**

**DANGER**



**Hazard statements** • No adverse health effects expected if the product is handled in accordance with this Safety Data



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Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs include:

May cause skin and eye irritation.

May cause cancer via inhalation of respirable dusts.

May cause respiratory irritation.

Causes damage to Lungs – Silicosis, through inhalation of respirable dust.

Causes damage to Lungs - Silicosis - through prolonged or repeated exposure via inhalation of respirable dust.

### Precautionary statements

**Prevention** • Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

In case of inadequate ventilation wear respiratory protection.

Do not eat, drink or smoke when using this product.

Use only in a well-ventilated area.

Wear protective work gloves and safety glasses.

**Response** • May be washed with soap and water.

If skin irritation occurs: Get medical advice/attention.

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.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If experiencing respiratory symptoms: Get medical advice/attention.

If exposed or concerned: Get medical advice/attention.

**Storage/Disposal** • Store in a controlled area.

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Other information

**NFPA** • Health = 1, Flammability = 0, Reactivity = 0, Special Information = None

**HMIS** • Health = \*1, Flammability = 0, Reactivity = 0, PPE = E

\* Chronic Health Hazard

E = Safety glasses, gloves and a dust respirator

## Section 3 - Composition/Information on Ingredients

### Mixture

#### Composition



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Chemical Name	Identifiers	%	Hazardous
Quartz	CAS:14808-60-7	> 65%	Yes
Iron oxide	CAS:1309-37-1	> 4%	No
Bentonite	CAS:1302-78-9	5% TO 10%	Yes
Bituminous coal	CAS: Not Available	2% TO 5%	No
Cellulose	CAS:9004-34-6	0.1% TO 1%	Yes
Aluminum oxide (non-fibrous)	CAS:1344-28-1	5% TO 15%	No
Calcium oxide	CAS:1305-78-8	> 1%	Yes

CALIFORNIA RESIDENTS: This product contains one or more chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

### Section 4: First-Aid Measures

#### Description of first aid measures

- Inhalation** • IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
- Skin** • IF ON SKIN: May be washed with soap and water. If skin irritation occurs: Get medical advice/attention.
- Eye** • 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.
- Ingestion** • Health effects are not known or expected to occur under normal use. Low hazard for usual industrial or commercial handling.

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

- Refer to Section 11 - Toxicological Information.

### Section 5: Fire-Fighting Measures

#### Extinguishing media

**Suitable Extinguishing Media** • Not Applicable, Green Foundry Sand is neither a fire nor an explosion hazard. Dust may be used to smother Class A and B fires.

**Unsuitable Extinguishing Media** • Not Applicable.

**Firefighting Procedures** • Not Applicable.

#### Special hazards arising from the substance or mixture

**Unusual Fire and Explosion Hazards** • Not Applicable (Note: Explosibility testing has indicated that Green Foundry Sand does not pose a fire/explosion hazard when finely suspended in the air. It is still recommended that best management practices be applied at the site of use to prevent the creation of conditions favorable to dust explosions.)

**Hazardous Combustion Products** • Not applicable.



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### Advice for firefighters

- Not Applicable.

### Section 6 - Accidental Release Measures

#### Personal precautions, protective equipment and emergency procedures

**Personal Precautions**                      • Ventilate enclosed areas. Wear appropriate personal protective equipment and protective clothing.

**Emergency Procedures**                • Not applicable. Green Foundry Sand is an inert material.

#### Environmental precautions

- No known significant environmental effects.

#### Methods and material for containment and cleaning up

**Containment/Clean-up Measures**                • Mechanically retrieve spilled material and return it to the original container.

**Prohibited Materials**                      • Not applicable. Green Foundry Sand is an inert material.

### Section 7 - Handling and Storage

#### Precautions for safe handling

**Handling** • No special requirements needed. Avoid spillage and practice good housekeeping.

#### Conditions for safe storage, including any incompatibilities

**Storage** • Store in a controlled area.  
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Section 8 - Exposure Controls/Personal Protection

**Exposure Limits/Guidelines**                      • No specific information is available for Green Foundry Sand. Product ingredient information provided below.

Exposure Limits/Guidelines for Ingredients				
	Result	ACGIH	NIOSH	OSHA
Cellulose (9004-34-6)	TWAs	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> TWA (respirable)	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> TWA (respirable)
Calcium oxide (1305-78-8)	TWAs	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA
Iron oxide (1309-37-1)	TWAs	5 mg/m <sup>3</sup> TWA (respirable)	5 mg/m <sup>3</sup> TWA (dust and fume, as Fe)	10 mg/m <sup>3</sup> TWA (fume); 15 mg/m <sup>3</sup> TWA (total dust, listed under Rouge) 5 mg/m <sup>3</sup> TWA (respirable, listed under Rouge)
Aluminum oxide	TWAs	Not established	Not established	15 mg/m <sup>3</sup> TWA (total dust)



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(non-fibrous) (1344-28-1)				5 mg/m3 TWA (respirable)
Quartz (14808-60-7)	TWAs	0.025 mg/m3 TWA (respirable)	0.05 mg/m3 TWA (respirable)	0.05 mg/m3 PEL (respirable)

### Exposure controls

#### Engineering

#### Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

#### Personal Protective Equipment

#### Pictograms



#### Respiratory

- Use of a NIOSH approved dust respirator is recommended where airborne dust levels exceed appropriate PELs and TLVs.

#### Eye/Face

- Wear safety glasses.

#### Hands

- Wear standard work gloves.

#### Skin/Body

- No data available.

#### General Industrial Hygiene Considerations

- Practice good housekeeping and avoid creating/breathing dust. Do not allow dust to collect. Maintain, clean, and fit test respirators in accordance with OSHA regulations.

#### Environmental Exposure Controls

- No data available

## Section 9 - Physical and Chemical Properties

### Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid Dust	Appearance/Description	Fine granular
Color	Gray or black	Odor	Odorless
Taste	No data available	Odor Threshold	No data available
General Properties			
Boiling Point	4046 F(2230 C)	Melting Point	3000 F(1649 C)
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	= 2.65	Bulk Density	No data available
Water Solubility	Insoluble		
Volatility			



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Vapor Pressure	Not relevant	Vapor Density	Not relevant
<b>Flammability</b>			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant		

### Section 10: Stability and Reactivity

#### Reactivity

- The product is stable.

#### Chemical stability

- Stable

#### Possibility of hazardous reactions

- Under normal conditions of storage and use, hazardous reactions will not occur.

#### Conditions to avoid

- Incompatible materials.

#### Incompatible materials

- Incompatible Materials: Oxidizers (strong), Hydrofluoric acid (7664-39-3)

#### Hazardous decomposition products

Not Applicable.

### Section 11 - Toxicological Information

#### Other Material Information

- No specific toxicological information is available for Green Foundry Sand. Product ingredient information provided below.

Components		
Quartz (> 65%)	14808-60-7	<p><b>Acute Toxicity:</b> Inhalation-Human TLo • 16 mppcf 8 Hour(s) 17.9 Year(s)-Intermittent; <i>Lungs, Thorax, or Respiration:</i><b>Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Cough; Lungs, Thorax, or Respiration:Dyspnea; Inhalation-Rat TLo • 200 mg/kg; <i>Lungs, Thorax, or Respiration:</i><b>Fibrosis, focal (pneumoconiosis); Lungs, Thorax, or Respiration:Other changes; Nutritional and Gross Metabolic:Changes in Chemistry or Temperature:Fe;</b></b></p> <p><b>Multi-dose Toxicity:</b> Inhalation-Rat TLo • 6.2 mg/m<sup>3</sup> 6 Hour(s) 6 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Other changes; Blood:Changes in spleen; Immunological Including Allergic:Increase in cellular immune response;</i> Inhalation-Rat TLo • 80 mg/m<sup>3</sup> 26 Week(s)-Intermittent; <i>Lungs, Thorax, or Respiration:</i><b>Fibrosis, focal (pneumoconiosis); Blood:Changes in spleen; Immunological Including Allergic:Decrease in cellular immune response;</b></p> <p><b>Tumorigen / Carcinogen:</b> Inhalation-Rat TLo • 50 mg/m<sup>3</sup> 6 Hour(s) 71 Week(s)-Intermittent; <i>Tumorigenic:</i><b>Carcinogenic by RTECS criteria; Lung:Tumors</b></p>
Iron oxide (> 4%)	1309-37-1	<p><b>Acute Toxicity:</b> Inhalation-Rat TLo • 0.8 mg/kg; <i>Lungs, Thorax, or Respiration:</i><b>Emphysema; Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels:Multiple enzyme effects; Biochemical:Metabolism (intermediary):Effect on inflammation or mediation of inflammation</b></p>
Bentonite (5% TO 10%)	1302-78-9	<p><b>Multi-dose Toxicity:</b> Ingestion/Oral-Rat TDLo • 700 mg/kg 7 Day(s)-Intermittent; <i>Endocrine:</i><b>Other changes;</b></p> <p><b>Tumorigen / Carcinogen:</b> Ingestion/Oral-Mouse TDLo • 12000 g/kg 28 Week(s)-Continuous; <i>Tumorigenic:</i><b>Equivocal tumorigenic agent by RTECS criteria; Liver:Tumors</b></p>
Aluminum oxide	1344-28-1	<p><b>Multi-dose Toxicity:</b> Inhalation-Rat LC50 • 0.2 mg/L 5 Hour(s) 28 Week(s) • Comments: Rat Lung, Thorax, or Respiration: Structural or functional change in trachea or bronchi Lung, Thorax, or Respiration: Chronic pulmonary</p>



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(5% TO 15%)		edema or congestion
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### Results of health hazard classification

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • Acute Toxicity - No Data Available; Acute Toxicity - Dermal - No Data Available; Acute Toxicity - Inhalation - No Data Available; Acute Toxicity - Oral - No Data Available
Aspiration Hazard	OSHA HCS 2012 • No Data Available
Carcinogenicity	OSHA HCS 2012 • Carcinogenicity 1A
Germ Cell Mutagenicity	OSHA HCS 2012 • No Data Available
Skin corrosion/Irritation	OSHA HCS 2012 • No Data Available
Skin sensitization	OSHA HCS 2012 • No Data Available
STOT-RE	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 1; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	OSHA HCS 2012 • No Data Available
GHS Properties (cont'd)	Classification
Respiratory sensitization	OSHA HCS 2012 • No Data Available
Serious eye damage/Irritation	OSHA HCS 2012 • No Data Available

#### Target Organs

- Lungs, Silicosis

#### Route(s) of entry/exposure

- Inhalation, Skin, Eye

#### Medical Conditions Aggravated by Exposure

- Dusts may aggravate asthma or other respiratory disorders. Lungs Silicosis.

#### Potential Health Effects

No adverse health effects are expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects may arise if the product is mishandled and overexposure occurs.

#### Inhalation

##### Acute (Immediate)

- May cause respiratory irritation. Short periods of very heavy exposure to dusts may result in rapidly developing Silicosis.

##### Chronic (Delayed)

- Repeated and prolonged exposure may cause irritation. Chronic overexposure to dust containing respirable sized crystalline silica can cause delayed lung injury (Silicosis). Inhalation of dust containing crystalline silica may contribute to pre-existing pulmonary diseases such as asthma and lung disorders associated with smoking. Repeated and prolonged exposure may cause cancer.

#### Skin

##### Acute (Immediate)

- May cause irritation.

##### Chronic (Delayed)

- Repeated and prolonged exposure may cause irritation.



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### Eye

- Acute (Immediate)** • May cause irritation.
- Chronic (Delayed)** • Repeated and prolonged exposure may cause irritation.

### Ingestion

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • Under normal conditions of use, no health effects are expected.

- Reproductive Effects** • No data available.

- Mutagenic Effects** • No data available.

- Carcinogenic Effects** • No data available on product

Carcinogenic Effects			
	CAS	IARC	NTP
Iron oxide	1309-37-1	Group 3-Not Classifiable	Not Listed
Quartz	14808-60-7	Group 1-Carcinogenic	Known Human Carcinogen

## Section 12 - Ecological Information

### Toxicity

- Green Foundry Sand is an inert material with minimal environmental impacts. Detailed ecological information for Green Foundry Sand is available upon request.

### Persistence and degradability

- No data available. Due to material insolubility of Green Foundry Sand not expected to biodegrade.

### Bioaccumulative potential

- No data available.

### Mobility in Soil

- No data available.

### Results of PBT and vPvB assessment

- No data available on product.

### Other adverse effects

- Ecological Fate** • No data available.

- Potential Environmental Effects** • No data available.





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### Section 13 - Disposal Considerations

#### Waste treatment methods

**Product waste** • Reuse or recycle. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	NDA	NDA	NDA	NDA	NDA
TDG	NDA	NDA	NDA	NDA	NDA

**Special precautions for user**

- No special precautions.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

- No data available

**Other information**

- Do not store and transport with oxidizers etc.

**DOT** • Not regulated as a hazardous material.

**TDG** • Not regulated as a dangerous good.

### Section 15 - Regulatory Information

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

**SARA Hazard Classifications (40 CFR § 370.2)**

- Acute, Chronic

Inventory		
Component	CAS	TSCA
Green Foundry Sand	NDA	Not listed. All components are on the TSCA inventory or are excluded from listing.

#### United States

##### Labor

**U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals**

•Green Foundry Sand and ingredients (unless listed below)

Not Listed

**U.S. - OSHA - Specifically Regulated Chemicals**

•Green Foundry Sand and ingredients (unless listed below)

Not Listed



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### Environment

**U.S. - CERCLA/SARA – Section 302.4 Hazardous Substances and their Reportable Quantities**

•Green Foundry Sand and ingredients (unless listed below) Not Listed

**U.S. - CERCLA/SARA - Section 304 Extremely Hazardous Substances EPCRA RQs**

•Green Foundry Sand and ingredients (unless listed below) Not Listed

**U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs**

•Green Foundry Sand and ingredients (unless listed below) Not Listed

**U.S. - CERCLA/SARA - Section 313 - Emission Reporting**

•Green Foundry Sand and ingredients (unless listed below) Not Listed

**U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing**

•Green Foundry Sand and ingredients (unless listed below) Not Listed

### United States - California

#### Environment

**U.S. - California - Proposition 65 - Carcinogens List**

•Green Foundry Sand and ingredients (unless listed below)		Not Listed
•Quartz	14808-60-7	carcinogen, initial date 10/1/88 (airborne particles of respirable size)

### Section 16 - Other Information

**Classification method for mixtures** • Carcinogenicity classification based upon cut-off values/concentration limits of ingredients.

**Last Revision Date** • April 7, 2021

**Disclaimer/Statement of Liability** • The information and recommendations made herein apply to our products only and are not to be combined with other product(s). The material contained herein is believed to be accurate. No guaranty of accuracy is made. It is the purchaser's responsibility before using any product to verify this data under their own conditions and to determine if the product is suitable for their purposes.



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### Green Foundry Sand

According to OSHA 29 CFR 1910.1200 HCS



**DANGER**

No adverse health effects expected if the product is handled in accordance with this product label and the Safety Data Sheet.

Symptoms or effects that may arise if the product is mishandled and overexposure occurs include:

May cause skin and eye irritation.

May cause cancer via inhalation of respirable dusts.

May cause respiratory irritation.

Causes damage to Lungs – Silicosis, through inhalation of respirable dust.

Causes damage to Lungs - Silicosis - through prolonged or repeated exposure via inhalation of respirable dust.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust.

In case of inadequate ventilation wear respiratory protection.

Do not eat, drink or smoke when using this product.

Use in a well-ventilated area.

Wear protective work gloves and safety glasses.

May be washed with soap and water.

If skin irritation occurs: Get medical advice/attention.

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.

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If experiencing respiratory symptoms: Get medical advice/attention.

If exposed or concerned: Get medical advice/attention.

Store in a controlled area.

Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Waupaca Foundry, Inc., 1955 Brunner Drive PO Box 249 Waupaca, WI 54981 United States,  
General Information: 715-258-6611; Emergency: 715-258-6611.