

## Emerald Creek Garnet

### SECTION 1. IDENTIFICATION

**Product Identifier** Emerald Creek Garnet  
**Recommended Use** Abrasive jet cutting, filtration and blast cleaning media.  
**Restrictions on Use** Use only as directed.  
**Manufacturer/Supplier Identifier** Opta Minerals Inc., 407 Parkside Drive  
P.O. Box 260, Waterdown, Ontario, Canada, L0R 2H0, (905) 689-7361,  
www.optaminerals.com  
**Emergency Phone No.** CHEMTREC (Canada & USA), 1-800-424-9300, 24 hours  
CHEMTREC, (outside North America), 1-703-527-3887, 24 hours  
**SDS No.** 1107

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

**Classification**

Carcinogenicity - Category 1A; Specific target organ toxicity (repeated exposure) - Category 1

**Label Elements**



Danger

H350 - May cause cancer through prolonged or repeated exposure by inhalation.

H335 - May cause respiratory irritation.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Almandine Garnet	1302-62-1	93-95	Fe <sub>3</sub> Al <sub>2</sub> (SiO <sub>4</sub> ) <sub>3</sub>	Iron Aluminum Silicate
Crystalline Silica Quartz	14808-60-7	2-4	SiO <sub>2</sub>	
Silica, crystalline quartz, respirable	14808-60-7	<1	SiO <sub>2</sub>	
Staurolite	12182-56-8	<1	Fe, Mg) 4Al <sub>18</sub> H <sub>2</sub> Si <sub>3</sub> O <sub>48</sub>	

### SECTION 4. FIRST-AID MEASURES

**First-aid Measures**

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### **Inhalation**

Move to fresh air. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a Poison Centre or doctor.

### **Skin Contact**

Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes.

### **Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Seek immediate medical attention should irritation or pain persists.

### **Ingestion**

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Call a Poison Centre or doctor if you feel unwell.

### **Most Important Symptoms and Effects, Acute and Delayed**

May irritate or cause inflammation or pulmonary fibrosis of the respiratory system.

### **Immediate Medical Attention and Special Treatment**

#### **Target Organs**

Respiratory system.

## **SECTION 5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

#### **Suitable Extinguishing Media**

Not combustible. Use extinguishing agent suitable for surrounding fire.

### **Specific Hazards Arising from the Product**

Does not burn.

Not known to generate any hazardous decomposition products in a fire.

### **Special Protective Equipment and Precautions for Fire-fighters**

Wear self contained breathing apparatus.

## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions, Protective Equipment, and Emergency Procedures**

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Review Section 7 (Handling) of this safety data sheet before proceeding with clean-up.

### **Environmental Precautions**

Although this product is not classified as an environmentally hazardous material, large or frequent spills may cause potential problems.

### **Methods and Materials for Containment and Cleaning Up**

Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

## **SECTION 7. HANDLING AND STORAGE**

### **Precautions for Safe Handling**

Avoid generating dusts. Wear personal protective equipment to avoid direct contact with this chemical.

### **Conditions for Safe Storage**

Store in an area that is: dry.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Crystalline Silica Quartz	0.025 mg/m3 * A2		0.1 mg/m3 *			
Almandine Garnet			5 mg/m3 *			
Silica, crystalline quartz, respirable	0.025 mg/m3 * A2		0.1 mg/m3 *			
Staurolite			5 mg/m3 *			

\* respirable total dust, OSHA (PEL)= 15 mg/m3 crystalline Silica, ACGIH, TWA, 0.10 mg / m3 (ACGIH), 0.025 mg /m3, respirable.

### Appropriate Engineering Controls

Do not allow product to accumulate in the air in work or storage areas, or in confined spaces. Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

### Individual Protection Measures

#### Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible. Do not get in eyes.

#### Skin Protection

Avoid repeated or prolonged skin contact. Always wear insulated protective clothing, if contact is possible.

#### Respiratory Protection

Wear a NIOSH approved air-purifying respirator with N100, R100, or P100 filter(s).

In conditions where the levels of airborne dust exceed the capabilities of the above referenced respirators, a supplied-air respirator may be necessary.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

Appearance	Red - brown crystalline.
Odour Threshold	Not applicable
pH	Not applicable
Melting Point/Freezing Point	Not applicable (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	Not available
Solubility	Not applicable in water
Auto-ignition Temperature	Not applicable
Other Information	
Physical State	Solid

## SECTION 10. STABILITY AND REACTIVITY

### Reactivity

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Not reactive under normal conditions of use.

**Chemical Stability**

Normally stable.

**Possibility of Hazardous Reactions**

Not applicable.

**Conditions to Avoid**

Generation of dust.

**Incompatible Materials**

Oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid).

**Hazardous Decomposition Products**

Not applicable.

**SECTION 11. TOXICOLOGICAL INFORMATION**

**Likely Routes of Exposure**

Inhalation. Skin contact. Eye contact. Ingestion.

**Acute Toxicity**

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Crystalline Silica Quartz	Not available	500 mg/kg	Not available
Almandine Garnet	Not available	Not available	Not available
Silica, crystalline quartz, respirable	Not available	500 mg/kg	Not available
Staurolite	Not available	Not available	Not available

**Skin Corrosion/Irritation**

May cause irritation.

**Serious Eye Damage/Irritation**

May cause irritation or injury due to mechanical abrasion.

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**

May irritate or cause inflammation or pulmonary fibrosis of the respiratory system.

**Skin Absorption**

May cause irritation.

**Ingestion**

May cause irritation or nausea.

**Aspiration Hazard**

May be drawn into the lungs (aspirated) if swallowed or vomited.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

Long term inhalation of dusts can attribute to risk of lung diseases.

Inhalation of respirable silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of silica dust may cause serious health effects which can include the following; Silicosis, Accelerated Silicosis, Acute Silicosis, Cancer, Autoimmune Disease, Tuberculosis and Kidney Disease.

**Respiratory and/or Skin Sensitization**

May cause irritation on prolonged contact.

**Carcinogenicity**

Crystalline Silica (quartz) has been determined as carcinogen.

**Reproductive Toxicity**

### Development of Offspring

There is no evidence this product contributes Teratogenicity or Embryotoxicity.

### Sexual Function and Fertility

No ingredients in this product are known to contribute to reproductive toxicity.

### Germ Cell Mutagenicity

Not known to be a mutagen.

### Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

Although this product is not classified as an environmentally hazardous material, large or frequent spills may cause potential problems.

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

## SECTION 15. REGULATORY INFORMATION

### Safety, Health and Environmental Regulations

#### Canada

#### WHMIS 1988 Classification

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

#### USA

#### Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

#### Additional USA Regulatory Lists

California Proposition 65: Crystalline silica (airborne particulates of respirable size) is known by the State of California to cause cancer.

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Crystalline silica (Acute and Chronic Health Hazard)

SARA 313: Product contains no chemicals that are subject to Annual Release Reporting Requirements.

Massachusetts Right to Know: Crystalline silica is listed

New Jersey Right to Know: Crystalline silica is listed

Pennsylvania Right to Know: Crystalline silica is listed.

## SECTION 16. OTHER INFORMATION

<b>NFPA Rating</b>	<b>Health - 1</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>
<b>SDS Prepared By</b>	Jennifer Dickison		
<b>Phone No.</b>	(208) 245-2096		
<b>Date of Preparation</b>	November 15, 2017		
<b>Date of Last Revision</b>	September 20, 2017		
<b>Key to Abbreviations</b>	ACGIH® = American Conference of Governmental Industrial Hygienists OSHA = US Occupational Safety and Health Administration		

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**References** HSDB® = Hazardous Substances Data Bank  
CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).  
Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault  
Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and  
Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian  
Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National  
Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational  
Health and Safety (CCOHS).

**Disclaimer** To the best of our knowledge, the information contained herein is accurate.  
Although certain hazards are described herein, we can not guarantee that these are the only  
hazards that exist.  
Opta Minerals Inc. assumes no liability arising out of the use of this product by others.