

Garnet Sand IG

SECTION 1. IDENTIFICATION

Product Identifier	Garnet Sand IG
Other Identification	Garnet Andradite
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.	1158

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

Precaution

P260: Do not breathe dust.

P285: In case of inadequate ventilation, wear respiratory protection.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Andradite Garnet	15078-96-3	>99	Ca ₃ Fe ₂ (SiO ₄) ₃	
Silica, crystalline quartz	14808-60-7	<1	SiO ₂	

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.

If eye irritation persists, get medical advice or attention.

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.

Unsuitable Extinguishing Media

Not applicable.

Specific Hazards Arising from the Product

Does not burn.

This product presents no unusual hazards in a fire situation.

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 a dry area.

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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
Silica, crystalline quartz	0.025 mg/m3 * A2					
Andradite Garnet	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 N95 or higher rating 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	Grey - 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

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

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Possibility of Hazardous Reactions

Not applicable.

Conditions to Avoid

Generation of dust.

Incompatible Materials

Strong acids (e.g. hydrochloric acid).
Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Not applicable.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Silica, crystalline quartz	Not available	22,500 mg/kg (rat)	Not available
Andradite Garnet	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.

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Interactive Effects

None known.

SECTION 12. ECOLOGICAL INFORMATION

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

Persistence and Degradability

No ingredient of this product or its degradation products is known to be highly persistent.

Bioaccumulative Potential

This product and its degradation products are not known to bioaccumulate.

Mobility in Soil

If released into the environment, this product does not move through the soil.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. The required hazard evaluation of the waste and compliance with the applicable hazardous waste laws are the responsibility of the user.

SECTION 14. TRANSPORT INFORMATION

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

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
IMO (Marine)	Not allocated	Not classified for transportation	Not classed as Dangerous	Not classified for transportation

Special Precautions Please note: Not classified as a marine pollutant

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Product Name Andradite Garnet

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

WHMIS 1988 Classification



Class D2A

D2A - Very Toxic (Carcinogenicity)

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.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Andradite Garnet is not listed on the DSL, however all of the chemical components of the garnet are listed.

USA

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Additional USA Regulatory Lists

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

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

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.

Custom Regulatory 1

IARC: Crystalline silica (quartz) is classified in IARC Group 1 Carcinogen

SECTION 16. OTHER INFORMATION

NFPA Rating	Health - 1	Flammability - 0	Instability - 0
SDS Prepared By	Ron Harber		
Phone No.	(905) 689-7361, ext 351		
Date of Preparation	March 28, 2018		
Date of Last Revision	August 21, 2017		
Key to Abbreviations	ACGIH® = American Conference of Governmental Industrial Hygienists OSHA = US Occupational Safety and Health Administration HSDB® = Hazardous Substances Data Bank		
References	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.		

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