



Northern Filter Media, Inc.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Garnet Sand IG

Other Identification Garnet Andradite

Supplier Northern Filter Media Inc.
2509 Pettibone Ave
Muscatine, Iowa 52761

Recommended Use Water filtration

SDS No. 0010071

Emergency Phone No. 563-263-2711

SECTION 2. HAZARDS IDENTIFICATION

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

GHS Label Elements:



Danger

May cause cancer or damage to respiratory system through prolonged or repeated exposure by inhalation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Silica, amorphous	61790-53-2	30-40	SiO ₂
Iron Oxide	1309-37-1	25-35	Fe ₂ O ₃
Calcium oxide, reacted	1305-78-8	20-30	CaO
Andradite	15078-96-3	>99	
Aluminum oxide	1344-28-1	1-5	Al ₂ O ₃
Manganese oxide	1317-35-7	1-3	MnO
Magnesium oxide	1309-48-4	1-3	MgO
Titanium Dioxide	13463-67-7	1-3	TiO ₂
Zirconium oxide	1314-23-4	1-3	ZrO ₂
Silica, crystalline quartz	14808-60-7	<1	SiO ₂

SECTION 4. FIRST-AID MEASURES**First-aid Measures:****Inhalation**

Move to fresh air. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a Poison Center 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/attention.

Ingestion

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

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 Chemical

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 an area that is: dry.

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, amorphous			6 mg/m3*			
Iron Oxide	5 mg/m3* A4		10 mg/m3*			
Calcium oxide, reacted	2 mg/m3		5 mg/m3			
Aluminum oxide	1 mg/m3* A4		5 mg/m3*			
Manganese oxide	0.2 mg/m3					
Magnesium oxide	10 mg/m3* A4		15 mg/m3			
Titanium Dioxide	10 mg/m3		15 mg/m3			
Zirconium oxide	10 mg/m3					
Silica, crystalline quartz	.025 mg/m3* A2					
Andradite	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.
Odor	Faint
Odor 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)
Vapor Pressure	Not applicable
Vapor 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.
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, amorphous	Not available	3,160 mg/kg (rat)	Not available
Iron Oxide	Not available	> 10,000 mg/kg (rat)	Not available
Calcium oxide, reacted	Not available	> 2,000 mg/kg (rat)	Not available
Aluminum oxide	Not available	> 5,000 mg/kg (rat)	Not available
Manganese oxide	Not available	Not available	Not available
Magnesium oxide	Not available	810 mg/kg (mouse)	Not available
Titanium Dioxide	> 6,820 mg/m ³ (rat)	> 25,000 mg/kg (rat)	Not available
Zirconium oxide	Not available	> 8,800 mg/kg (rat)	Not available
Silica, crystalline quartz	Not available	22,500 mg/kg (rat)	Not available
Andradite	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	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 or 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.

SECTION 15. REGULATORY INFORMATION

US Safety, Health and Environmental Regulations

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

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. Accelrys, Inc. 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. Northern Filter Media, Inc. assumes no liability arising out of the use of this product by others.