

MATERIAL SAFETY DATA SHEET**THYSSENKRUPP WAUPACA****SECTION 1 – Product Identification & Company Information**

IDENTITY (As used on label and list) Green Foundry Sand	HMIS RATING: Health <u>1</u> Flammability <u>0</u> Reactivity <u>0</u> PPE <u>E</u>
Manufacturer's Name: ThyssenKrupp Waupaca	Emergency Telephone Number: 715-258-6611
Street Address: 1955 Brunner Drive Mailing Address: P.O. Box 249	Telephone Number: 715-258-6611
City, State, Zip Code: Waupaca, WI 54981	Fax Number: 715-258-9268
E-Mail Address/Web Site: http://thyssenkruppwaupaca.com	Date Prepared: 7/8/10

SECTION 2 – Hazard Identification**OVERVIEW:**

Green Foundry Sand is not flammable. Green Foundry Sand may cause irritation of eyes, skin and respiratory tract. Prolonged overexposure to airborne dust may result in serious respiratory health effects.

POTENTIAL HEALTH EFFECTS:

Primary Route(s) of Entry: Inhalation of dust.

Carcinogen: See Section 3.

Health Hazard: (Acute and Chronic): See below. Acute hazards can manifest as rapidly developing Silicosis resulting from short periods of very heavy exposure (sandblasting).

Signs and Symptoms of Exposure: 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. IARC studies have shown sufficient evidence from animal studies to categorize crystalline silica as a group 1 carcinogen.

Medical Conditions

Generally Aggravated by Exposure: Any pre-existing conditions of the lungs. Avoid contact with eyes.

ENVIRONMENTAL EFFECTS:

No known significant environmental effects.

SECTION 3 – Composition/Information On Ingredients

Components	CAS #	%	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)	Carcinogen
Silica, Crystalline Quartz	14808-60-7	>65	10 / %SiO ₂ +2 (Respirable)	0.025 (Respirable)	IARC-1, MAK-1, NIOSH-Ca, NTP-K, TLV-A2
Bentonite	1302-78-9	5-10	NA	NA	(See above for Silica portion)
Bituminous Coal	NA	2-5	2.4 (< 5% Respirable SiO ₂) 10/ %SiO ₂ + 2 (>5% Respirable SiO ₂)	0.9 (Respirable)	IARC-3, TLV-A4, MAK-3B
Cellulose / Cereal	NA	0.1-1	5 (Respirable)	10	
Aluminum Oxide (Non-fibrous)	1344-28-1	5-15	5 (Respirable)	NA	TLV-A4
Iron Oxide	1309-37-1	4-5	10 (Fume)	5 (Respirable)	TLV-A4, IARC-3
Calcium Oxide	1305-78-8	1-2	5	2	

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

EYES: In case of eye contact, immediately flush repeatedly with water and consult a physician if irritation persists.

SKIN: Skin contact may be washed with soap and water. If rash develops, seek medical attention.

INGESTION: Not normally applicable.

INHALATION: Move to an area of fresh air and give oxygen or CPR if necessary. Seek medical attention for treatment and observation.

SECTION 5 – Fire & Explosion Data

Flash Point (Method Used): N/A	Flammable Limits: N/A	LEL: N/A	UEL: N/A
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Extinguishing Media: N/A, Green Foundry Sand in material form is neither a fire nor an explosion hazard. Sand may be used to smother Class A and B fires.

Special Fire Fighting Procedures: N/A

Unusual Fire and Explosion Hazards: N/A (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.)

SECTION 6 – Accidental Release Measures

Accidental release measures do not apply to Green Foundry Sand, which is an inert material.

SECTION 7 – Handling & Storage

RECOMMENDED STORAGE: No special storage requirements needed. Avoid spillage and practice good housekeeping. Mechanically retrieve spilled material and return it to the original container for reuse.

SECTION 8 – Exposure Controls & Personal Protection

ENGINEERING CONTROLS:

Ventilation	Local Exhaust: To meet PEL standards	Special: N/A
	Mechanical (General): N/A	Other: N/A

PERSONAL PROTECTION:

Protective Gloves: Standard work gloves	Eye Protection: Safety glasses
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Other Protective Clothing or Equipment: Use of a NIOSH approved dust respirator is recommended where airborne dust levels exceed appropriate PEL's and TLV's.

Work/Hygienic Practices: 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.

SECTION 9- Physical & Chemical Properties

Boiling Point	4046 ° F	Specific Gravity (H ₂ O-1)	2.65
Vapor Pressure (mm Hg.)	N/A	Melting Point	3000 ° F

Vapor Density (AIR-1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
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Solubility in Water: Insoluble
 Appearance and Odor: Solid, gray or black, fine granular, with no odor.

SECTION 10 – Stability & Reactivity

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility: (Materials to Avoid): Hydrofluoric acid, powerful oxidizing agents.

Hazardous Decomposition or Byproducts: N/A

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

SECTION 11 – Toxicological Information

No specific toxicological information is available for Green Foundry Sand.

SECTION 12 – Ecological Information

No specific ecological information is available for Green Foundry Sand.

SECTION 13 – Disposal Considerations

If uncontaminated, dispose of or recycle as an inert mineral. If contaminated, use an appropriate disposal method in accordance with federal, state, and local regulations.

SECTION 14 – Transport Information

USA DEPARTMENT OF TRANSPORTATION (DOT) – HM181: Not regulated	
CANADIAN TRANSPORT DANGEROUS GOODS (TDG): Not regulated	SHIPPING NAME: Not regulated
HAZARD CLASS: Not regulated	UN (United Nations) # / NA (North American) # : Not regulated
LABEL(S) REQUIRED? No	PACKING GROUP: Not regulated
INTERNATIONAL TRANSPORTATION REGULATIONS: Not applicable	SPECIAL SHIPPING INFORMATION: Not applicable

SECTION 15 – Regulatory Information

U.S. EPA (Toxic Substances Control Act – TSCA): All components are on the TSCA inventory list or are excluded from listing.
U.S. EPA (Resource Conservation and Recovery Act – RCRA): This material is <u>not</u> classified as a hazardous waste under RCRA, or its regulations, 40 CFR Part 261 <u>et seq.</u>
U.S. EPA (Comprehensive Environmental Response Compensation and Liability Act – CERCLA): This material is <u>not</u> classified as a hazardous substance under CERCLA, 40 CFR Part 302.
U.S. EPA SARA Title III Section 302: This material is <u>not</u> classified as an extremely hazardous substance under Section 302.
U.S. EPA SARA Title III Section 311/312 Hazardous Characterization (40 CFR Part 370): Chronic Health

U.S. EPA (Superfund Amendments and Reauthorization Act - SARA Title III):

This material does not contain any components subject to reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 72. Quantity threshold amounts are 25,000 pounds for manufacturing, importing or processing and 10,000 pounds for otherwise used.

Section 16 – Other Information

Reason for revision: Conversion to ANSI format and general updates.