



SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Steel Mill Electric Arc Furnace Dust

CAS Number: Not applicable

Synonyms: EAF Dust, K061, Steel Mill Furnace Dust, Baghouse Dust

Use/Description: Inorganic Compounds, Metal Oxides

<i>Nucor Mill Locations</i>		24 Hour Contact – CHEMTREC 1-800-424-9300
Nucor Steel Arkansas 7301 E. County Road 142 Blytheville, Arkansas 72315 Safety Officer: (870) 762-2100	Nucor Steel Berkeley 1455 Hagan Avenue Huger, South Carolina 29450 Safety Officer: (843) 336-6000	Nucor Steel South Carolina 300 Steel Mill Road Darlington, S.C. 29540 Safety Officer: (843) 393-5841
Nucor Steel Indiana 4537 South Nucor Road Crawfordsville, IN 47933 Safety Officer: (765) 364-1323	Nucor Steel Nebraska 2911 East Nucor Road Norfolk, Nebraska 68701 Safety Officer: (402) 644-0200	Nucor Steel Auburn 25 Quarry Road Auburn, N.Y. 13021 Safety Officer: (315) 253-4561
Nucor Steel Texas U.S. Highway 79 South Jewett, Texas 75846 Safety Officer: (903) 626-4461	Nucor Steel Utah West Cemetery Road Plymouth, Utah 84330 Safety Officer: (435) 458-2300	Nucor Yamato Steel Intersection Hwy 18 East Blytheville, Arkansas 72316 Safety Officer: (870) 762-5500
Nucor Steel Decatur 4301 Iverson Blvd. Trinity, Alabama 35673 Safety Officer: (256) 301-3500	Nucor Steel Hertford County 1505 River Road Cofield, N.C. 27922 Safety Officer: (252) 356-3700	Nucor Steel Birmingham 2301 F.L. Shuttlesworth Drive Birmingham, Alabama 35234 Safety Officer: (205) 250-7400
Nucor Steel Kankakee One Nucor Way Bourbonnais, IL 60914 Safety Officer: (815) 939-5596	Nucor Steel Jackson 3630 Fourth Street Flowood, MS 39232 Safety Officer (601) 939-1623	Nucor Steel Seattle 2424 SW Andover Seattle, WA 98106 Safety Officer: (206) 933-2343
Nucor Steel Marion 912 Cheney Avenue Marion, Ohio 43302 Safety Officer: (740) 383-4011	Nucor Steel Tuscaloosa 1700 Holt Road, NE Tuscaloosa, Alabama 35404 Safety Officer: (205) 556-1310	Nucor Steel Memphis 3601 Paul R. Lowry Road Memphis, TN 38109 Safety Officer: (901) 786-5900
Nucor Steel Longview 5400 W. Loop 281, Bldg 52 Longview, TX 75603 Safety Officer: (903) 653-1647	Nucor Steel Gallatin 4831 U.S. Hwy 42 West Ghent, KY 41045 Safety Officer: (859) 567-3100	Nucor Steel Florida 22 Nucor Dr. Frostproof, FL 33843 (863) 546-5800
Nucor Steel Sedalia 500 Rebar Rd Sedalia, MO 65301 (660) 951-1700	Nucor Steel Brandenburg 100 Ronnie Greenwell Commerce Rd. Brandenburg, KY 40108 (270) 422-8200	

For general product information, contact facility as listed above. For emergencies, use the 24 Hour Contact.

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! HARMFUL IF INHALED. AVOID EYE CONTACT - MAY CAUSE SEVERE IRRITATION. AVOID SKIN CONTACT – MAY CAUSE IRRITATION AND/OR ALLERGIC REACTION. MAY CONTAIN CARCINOGENS, MUTAGENS, AND REPRODUCTIVE/DEVELOPMENTAL TOXICANTS. HOT MATERIAL MAY CAUSE THERMAL BURNS.

OSHA Hazards: Acute Toxicant
Irritant
Target Organ Toxicity – Lungs, Central Nervous System
Carcinogen
Reproductive Toxicant
Mutagen
Skin/Respiratory Sensitizer

GHS Classification: Acute Toxicity (Category 3)
Skin Irritation (Category 2)
Eye Damage (Category 1)
Specific Target Organ Toxicity – Repeat Exposure (Category 1)
Carcinogenicity (Category 1B)
Reproductive Toxicity (Category 1A)
Mutagenicity (Category 2)
Respiratory Sensitization (Category 1)
Skin Sensitization (Category 1)

Pictogram(s):



Signal Word: Danger

Hazard Statement(s):

H302+H332: Harmful if swallowed or inhaled.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H372: Causes damage to lung, central nervous system, and reproductive system through prolonged or repeat exposure.
H350: May cause cancer by inhalation.
H360: May damage fertility or the unborn child.
H341: Suspected of causing genetic defects.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317: May cause an allergic skin reaction.

Precautionary Statement(s):

P201: Obtain special instructions before use.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P305+P351+P310: IF IN EYES: Rinse cautiously with water for several minutes. Immediately call a poison center or doctor/physician.
P302+P352: IF ON SKIN: Wash with soap and water.

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P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Potential Health Effects

Primary routes of exposure: Eye and skin contact; inhalation.

Eye Contact

May be severely irritating to the eyes due to the presence of unhydrated lime. Symptoms may include pain, tears, burns, sensitivity to light, swelling and possible corneal damage. Scratching of the cornea can also occur if eye is rubbed. Fumes from hot material may be irritating. Contact with the heated material may cause thermal burns.

Skin Contact

May be irritating to the skin due to the presence of unhydrated lime. Repeated or prolonged skin contact may result in drying, reddening, itching, and cracking. May contain components that are capable of causing an allergic reaction. Contact with heated material may cause thermal burns.

Inhalation

Dusts may cause irritation of the nose, throat, and lungs. Excessive inhalation of metallic fumes or dusts may result in metal fume fever, an influenza-like illness. It is characterized by a sweet or metallic taste in the mouth, accompanied by dryness and irritation of the throat, cough, shortness of breath, pulmonary edema, general malaise, weakness, fatigue, muscle and joint pains, blurred vision, fever and chills. Typical symptoms last from 12 to 48 hours.

Ingestion

Swallowing large amounts may cause irritation of the digestive tract, resulting in nausea, and diarrhea.

Chronic or Special Toxic Effects

Repeated exposure to fine dusts may inflame the nasal mucosa and cause changes to the lung. The presence of iron oxide may cause a red-brown pigmentation of the eye and/or skin may occur.

May contain components that can cause cancer or reproductive effects. The following components are listed by NTP, OSHA, or IARC as carcinogens: Nickel, chromium (hexavalent), cobalt, lead, cadmium, antimony (trioxide), arsenic, beryllium. See Section 11, for additional, specific information on effects.

Target Organs

Overexposure to specific components of this product may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, hematopoietic (blood) system, and respiratory system. See Section 11, for additional, specific information on effects noted above.

Medical Conditions Aggravated by Exposure

Diseases of the skin such as eczema may be aggravated by exposure. Also, disorders of the respiratory system including asthma, bronchitis, and emphysema may be aggravated. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes or dusts of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	% Weight	Exposure Limits			
			ACGIH TLV (mg/m ³)		OSHA PEL (mg/m ³)	
<u>Elemental and/or Oxides of the Following:</u>						
Aluminum (Al)	7429-90-5	0-2.097	10 5	Dust Fume	15 5	Dust Respirable fraction
Antimony (Sb)	7440-36-0	0-1	0.5	As Antimony	0.5	As Antimony
Arsenic (As)	7440-38-2	0-1	0.01	As Arsenic (A1 Carcinogen)	0.01	As Arsenic
Beryllium (Be)	7440-41-7	0-1	0.002 0.01	As Beryllium (A1 Carcinogen) As Beryllium (STEL)	0.002 0.005	As Beryllium As Beryllium (Ceiling)
Cadmium (Cd)	7440-43-9	0-1	0.01 0.002	As Cadmium (A2 Carcinogen) Respirable fraction	0.005 0.0025	As Cadmium As Cadmium (Action Level)
Cobalt (Co)	7440-48-4	0-1	0.02	As Cobalt (A3 Carcinogen)	0.1	Metal/Dust/Fume
Copper (Cu)	7440-50-8	0-1	1 0.2	Dust Fume	1 0.1	Dust Fume
Lead (Pb)	7439-92-1	0-4.0	0.05	Dust / Fume (A3 Carcinogen)	0.05	Dust / Fume

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Components		CAS No.	% Weight	Exposure Limits			
				ACGIH TLV (mg/m ³)		OSHA PEL (mg/m ³)	
Manganese	(Mn)	7439-96-5	0.2-4.8	0.2	Elemental Mn and Inorg Compounds	5	Fume (Ceiling)
Mercury	(Hg)	7439-97-6	<0.01%	0.025	Vapor	0.1	Vapor
Nickel	(Ni)	7440-02-0	0-0.25	1.5	Metal	1	Metal and Insoluble Compounds
Phosphorus	(P)	7723-14-0	0-1	0.1	Phosphorus	0.1	Phosphorus
Selenium	(Se)	7782-49-2	0-1	0.2	Selenium	0.2	Selenium
Vanadium	(V)	7440-62-2	0-1	0.05	Oxide Dust/Fume	0.5 0.1	Oxide Dust (Ceiling) Oxide Fume (Ceiling)

NOTE: No permissible OSHA exposure limits (PEL) or ACGIH threshold limit values (TLV) exist for steel mill electric arc furnace dust. The above listing is a summary of elements used in alloying Nucor Steel Products. Various grades of steel will contain different combinations of these elements and/or trace materials. **Exact specifications may be found by calling the division and asking for a specifications sheet.**

4. FIRST AID MEASURES

Eye Contact

In case of overexposure to dusts or fumes, immediately flush eyes with plenty of water for at least 20 minutes occasionally lifting the eye lids. Get medical attention. Thermal burns should be treated as medical emergencies.

Skin Contact

Wash skin with large amounts of water. Get medical attention if irritation develops or persists. If thermal burn occurs, flush area with cold water and get immediate medical attention.

If widespread contamination occurs, remove contaminated clothing under safety shower and wash exposed areas with soap and large quantities of water. Obtain medical attention immediately.

Inhalation

If the exposed person has been overcome, notify response personnel and place established emergency rescue procedures into effect. Remove to fresh air. Get immediate medical attention if symptoms described in this Safety Data Sheet (SDS) develop. If not breathing, begin rescue breathing. If breathing is difficult, ensure that airway is clear and give oxygen.

Ingestion

Rinse mouth. DO NOT INDUCE VOMITING. Give plenty of water to drink. Obtain medical attention immediately. Never give anything by mouth to an unconscious person. Treat symptomatically and supportively. Get medical attention.

Other

Understand the facility's emergency rescue procedures and know the locations of rescue equipment before the need arises.

Notes to Physician

Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self limited in 24-48 hours. Chronic exposure to dusts may result in pneumoconiosis of mixed type.

5. FIRE FIGHTING MEASURES

Flash Point (Method): Not applicable

Flammable Limits (% volume in air): Not applicable

Auto ignition Temperature: Not applicable

Extinguishing Media: Product is noncombustible. Use firefighting measures for surrounding materials. Do not use water on product if it has become molten due to high temperatures.

Special Fire Fighting Procedures: Vapors and fumes containing iron, nickel, manganese, chromium, aluminum, cadmium, zinc, and lead (or their oxides) may be formed at temperatures above the melting point.

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Exposure to unknown concentrations of fumes and vapors require the wearing of a pressure-demand airline respirator or pressure-demand self-contained breathing apparatus (SCBA).

Unusual Fire or Explosion Hazards: None known.

6. ACCIDENTAL RELEASE MEASURES

Precautions if Material is Spilled or Released: Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in this SDS (see section 8). Keep unauthorized personnel away. Eliminate all sources of ignition. Reduce airborne dust with light water spray. Avoid getting water into containers. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. Vacuum type equipment is effective control and cleanup equipment. Vacuum and ventilation equipment should have HEPA type filters where appropriate. Material should be swept or vacuumed and placed into appropriate disposable containers. Prevent entry into drains, waterways, sewers, basements or confined areas. Unpermitted releases in excess of 10 pounds must be reported to the National Response Center.

7. HANDLING AND STORAGE

Storage Temperatures: Stable under normal temperatures and pressures.

Precautions to be Taken in Handling and Storing: Keep dust dry. Do not store on the ground. Store away from strong oxidizers. Avoid breathing dusts or fumes. Do not heat above 1575 C°. Use confined space entry procedures when entering baghouses, vessels, tanks, or other confined areas that contain furnace dust. Dust must be stored in approved containers located in approved areas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Avoid eye contact. Wear safety glasses or goggles. Dust resistant safety goggles are recommended under circumstances where particles could enter the eye.

Skin

Appropriate protective gloves and protective clothing (such as Tyvek®) should be worn as necessary. Good personal hygiene practices should be followed including cleansing exposed skin several times daily with soap and water, and laundering or dry cleaning soiled work clothing.

Respiratory Protection

Avoid inhaling dust or fumes. NIOSH/MSHA approved dust/fume/mist respirators should be used to avoid excessive exposure. See Section 3 for component material exposure limits. Approved respirators must be used as specified by an Industrial Hygienist or other qualified professional. Respirator users must be medically evaluated to determine if they are physically capable of wearing a respirator. Quantitative and/or qualitative fit testing and respirator training must be satisfactorily completed by all personnel prior to respirator use. Users of any style respirator must be clean shaven on those areas of the face where the respirator seal contacts the face. Exposure to unknown concentrations of vapors or mists requires the wearing of a pressure-demand airline respirator or pressure-demand self-contained breathing apparatus.

Ventilation

Good ventilation (typically 10 air changes per hour) should be used when handling furnace dust, in order to maintain airborne concentrations below the appropriate exposure limits for the components (See Section 3). Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation may be needed in some circumstances. Ventilation equipment should be checked regularly to ensure it is functioning properly. HEPA type filters should be used where appropriate.

Exposure Guidelines

No permissible OSHA exposure limits (PEL) or ACGIH threshold limit values (TLV) exist for steel mill electric arc furnace dust. See Section 3 for component materials. Various grades of steel will contain different combinations of these elements and/or trace materials.

Recommended decontamination facilities

Eye wash, washing facilities, safety shower when handling large amounts of furnace dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Appearance and Odor: Brown solid; musty odor
Boiling Point: Not available
Melting Point: Approximately 1575 °C
pH: 6.0 – 8.0
Specific Gravity (at 15.6°C): Not available
Density (at 15.6 °C): Not available
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not available
% Volatile, by Volume: Not available
Solubility in Water: Insoluble.
Evaporation Rate (Butyl Acetate = 1): Not available
Other Physical and Chemical Data: None

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Steel mill electric arc furnace dust at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume.

Hazardous Polymerization: Will not occur.

Incompatibility (Materials to Avoid): Reacts with strong acids to form hydrogen gas. Do not store near strong oxidizers.

Hazardous Decomposition Products: Fumes containing iron, nickel, manganese, chromium, aluminum, zinc, and lead (or their oxides) may be formed at temperatures above the melting point of dust. Refer to ANSI Z49.1

11. TOXICOLOGICAL INFORMATION

No additional specific toxicological information was available for this product. Breathing fumes or dusts may result in metal fume fever, which is an illness produced by inhaling metal oxides. These oxides are produced by heating various metals including cadmium, zinc, magnesium, copper, antimony, nickel, cobalt, manganese, tin, lead, beryllium, silver, chromium, aluminum, selenium, iron, and arsenic. The most common agents involved are zinc and copper. When fumes are generated because of high heat, they may be different in composition from the product. Chronic health effects (including cancer and reproductive effects) have been associated with the fumes and dusts of individual component metals.

The primary component of this product is iron oxide. Long-term exposure to iron dusts or fumes can result in a condition called siderosis, which is considered to be a benign pneumoconiosis. Symptoms may include chronic bronchitis, emphysema, and shortness of breath upon exertion. Ingestion overexposures to iron may affect the gastrointestinal, nervous, and hematopoietic system and the liver. Iron and steel founding, but not iron or iron oxide, has been listed as carcinogenic (Group 1) by IARC.

This product contains calcium oxide. Calcium oxide is very irritating to mucous membranes and moist skin as a result of local liberation of heat and dehydration of tissues upon slaking of the small size particles and the resulting alkalinity of the slaked product. Inflammation of respiratory passages and ulceration and perforation of the nasal septum have been attributed to inhalation of lime dust.

This product may contain small amounts of beryllium. Exposure to beryllium compounds can cause dermatitis, acute pulmonary inflammation, and chronic beryllium disease (CBD), a granulomatous lung disease characterized by dyspnea, cough, reduced pulmonary function, and a variety of other symptoms, including weight loss.. Beryllium is listed as a carcinogen by NTP, OSHA, and IARC.

This product may contain small amounts of cadmium. Primary target organs for cadmium overexposure are the lung and the kidney. Because of its cumulative nature, chronic cadmium poisoning can cause serious disease which takes many years to develop and may continue to progress despite cessation of exposure.

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Progression of the disease may not reflect current exposure conditions. It is also capable of causing a painful osteomalacia called "Itai-Itai" in postmenopausal women, and has caused developmental effects and/or reproductive effects in male and female animals. Cadmium is a listed carcinogen by NTP, OSHA, and IARC (Group 1).

This product may contain small amounts of chromium (primarily trivalent chromium compounds). Prolonged and repeated overexposure to chromium dusts or fumes may cause skin ulcers, nasal irritation and ulceration, lung and kidney damage, and cancer of the respiratory system, depending on the valence state of the chromium (trivalent – or hexavalent). Chromium compounds can be skin sensitizers. Chromium metal and trivalent chromium compounds have been designated by IARC as Group 3 carcinogens (Unclassifiable as to Carcinogenicity to Humans). Cancer is generally attributed to the hexavalent form of chromium which is listed as a carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of cobalt. Inhalation and dermal exposure to cobalt can result in sensitization. Bronchial asthma has been described in workers exposed to various forms of cobalt. Interstitial lung disease caused by metallic cobalt particles is an occupational lung disease generally referred to as hard metal lung disease.

This product may contain small amounts of copper. Copper dust and fumes can irritate the eyes, nose and throat causing coughing, wheezing, nosebleeds, ulcers and metal fume fever. Other effects from repeated inhalation of copper fumes include a metallic or sweet taste, and discoloration of skin, teeth or hair. Copper also may cause an allergic skin reaction. Overexposure to copper can affect the liver.

This product may contain lead. Lead can accumulate in the body. At high levels of exposure, toxic levels may accumulate within days or weeks. Consequently, exposure to fumes or dust may produce signs of polyneuritis, diminished vision and peripheral neuropathy, such as tingling and loss of feeling in fingers, arms and legs. Joint pain and gastrointestinal symptoms, such as anorexia, nausea, weight loss, and abdominal discomfort, are also common. Lead is a known male and female reproductive toxin and a known developmental toxin. It is also associated with central nervous system disorders, anemia, kidney dysfunction and neurobehavioral abnormalities. The brain is a major target organ for lead exposure. Elemental lead is listed as an IARC 2B carcinogen.

This product may contain small amounts of manganese. Chronic manganese poisoning primarily involves the central nervous system. Prolonged exposure to manganese dusts or fumes is associated with "manganism", a Parkinson-like syndrome characterized by a variety of neurological symptoms including muscle spasms, gait disturbances, tremors, and psychoses. Early symptoms include languor, sleepiness, and weakness in the legs. In more advanced cases, a mask-like facial expression, emotional disturbances, a spastic gait, and a tendency to fall when walking have been seen. A high incidence of pneumonia is seen with overexposure to some manganese compounds.

This product may contain small amounts of nickel. Prolonged and repeated contact with nickel may cause sensitization dermatitis. Inhalation of nickel compounds has caused lung damage as well as sinus, nasal and lung cancer in laboratory animals. There has been no clear evidence of excess cancer risk in non-nickel refinery workers. Other respiratory effects which have been reported include asthma, pulmonary fibrosis, and pulmonary edema. Nickel is a listed carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of vanadium. Adverse effects from dermal, inhalation or parenteral exposure to various vanadium compounds have been reported. The major target for vanadium pentoxide toxicity is the respiratory tract. Fumes or dust can cause severe eye and respiratory irritation, and systemic effects. Chronic bronchitis, green tongue, conjunctivitis, pharyngitis, rhinitis, rales, chronic productive cough, and tightness of the chest have been reported following overexposure. Allergic reactions resulting from skin and inhalation exposures have also been reported. A statistical association between vanadium air levels and lung cancer has been suggested, but vanadium currently is not regarded as a human carcinogen.

12. ECOLOGICAL INFORMATION

This material is considered toxic. Do not discharge into drains, sewers, lakes, streams, ponds, or other bodies of water.

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13. DISPOSAL CONSIDERATIONS

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. Furnace dust is a RCRA listed Hazardous Waste (K061). Unpermitted releases in excess of 10 pounds must be reported to the National Response Center. Dispose of in accordance with all local, state, and federal regulations. Furnace dust must be stabilized to specific standards before being disposed of in a subtitle C hazardous waste landfill. This material is subject to Land Disposal Regulations. Furnace dust can be reclaimed.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name: Environmentally Hazardous Substances, N.O.S.

DOT Hazard Classification: Class 9

UN/NA Number: 3077

DOT Packing Group: Packing Group III

Labeling Requirements: Required

Placards: Required

15. REGULATORY INFORMATION

NOTE: The regulatory information contained in this SDS is not intended to be comprehensive.

California Proposition 65:

⚠ WARNING: This product can expose you to chemicals including antimony, arsenic, beryllium, chromium, cobalt, cadmium, lead, nickel and mercury which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Massachusetts Substance List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium oxide, Chromium, Cobalt, Copper, Iron oxide dust, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc, Zinc oxide

Pennsylvania Hazardous Substance List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium oxide, Chromium, Cobalt, Copper, Iron oxide dust, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc, Zinc oxide

New Jersey Hazardous Substance List: Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium oxide, Chromium, Cobalt, Copper, Iron oxide dust, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc, Zinc oxide

The Resource Conservation and Recovery Act (RCRA)

Product is a RCRA listed Hazardous Waste (K061).

Toxic Substances Control Act (TSCA)

Components of this product are listed on the TSCA Inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Unpermitted releases in excess of 10 pounds must be reported to the National Response Center.

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

SECTION 311/312 HAZARD CATEGORIES: Immediate Health Effect, Delayed Health Effect

This material may contain chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 (listed below).

SECTION 313 REPORTABLE INGREDIENTS:

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<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration (% by weight)</u>
Aluminum	7429-90-5	<1.6
Antimony	7440-36-0	<1
Arsenic	7440-38-2	<1
Beryllium	7440-41-7	<1
Cadmium	7440-43-9	<1
Cobalt	7440-48-4	<1
Copper	7440-50-8	<1
Lead	7439-92-1	4
Manganese	7439-96-5	<4.8
Mercury	7439-97-6	<0.01
Nickel	7440-02-0	<0.25
Phosphorus	7723-14-0	<1
Selenium	7782-49-2	<1
Vanadium	7440-62-2	<1

16. OTHER INFORMATION

Disclaimer of Liability

Legally required information is given in accordance with applicable OSHA regulations. Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses, which infringe valid patents, or as extending any license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users. Use or retransmission of the information contained herein in any other format than the format as presented is strictly prohibited. Nucor neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.