



Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Hot or Cold Rolled Steel Sheet/Strip

ISG Code Number: I-001

CAS Number: Mixture

Manufacturer: ISG Indiana Harbor, Inc. 3001 Dickey Road, East Chicago, IN 46312

General Information: 219-391-2305

Original Issue Date: 5/31/02

Off-Hour Emergency Phone Number: 219-391-2595

Revised: Rev. 1 (6/13/02)

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	Percentage by wt.	OSHA PEL ¹	ACGIH TLV ²
Iron	7439-89-6	97 – 99.9	10 mg/m ³ - Iron oxide fume	5 mg/m ³ - Iron oxide dust and fume
Aluminum	7429-90-5	0.01 – 0.5	15 mg/m ³ - Total dust 5 mg/m ³ - Respirable fraction	10 mg/m ³ - Metal Dust 5 mg/m ³ - Welding fume
Boron	7440-42-8	≤ 0.003 max.	15 mg/m ³ - Total dust (as Boron oxide)	10 mg/m ³ - Boron oxide
Calcium	7440-70-2	≤ 0.005 max.	5 mg/m ³ - Calcium oxide	2 mg/m ³ - Calcium oxide
Carbon	7440-44-0	≤ 0.6 max	15 mg/m ³ - Total dust (PNOR) ³ 5 mg/m ³ - Respirable fraction (PNOR)	10 mg/m ³ - Inhalable fraction ⁴ (PNOS) ⁵ 3 mg/m ³ - Respirable fraction ⁶ (PNOS)
Chromium	7440-47-3	≤ 0.5 max.	1 mg/m ³ - Chromium metal	0.5 mg/m ³ - Chromium metal & Cr III compounds
Columbium	7440-03-1	≤ 0.15 max.	15 mg/m ³ - Total dust (PNOR) 5 mg/m ³ - Respirable fraction (PNOR)	10 mg/m ³ - Inhalable fraction (PNOS) 3 mg/m ³ - Respirable fraction (PNOS)
Copper	7440-50-8	≤ 0.4 max.	0.1 mg/m ³ - Fume (as Cu) 1 mg/m ³ - Dusts & mists (as Cu)	0.1 mg/m ³ - Fume 1 mg/m ³ - Dusts & mists (as Cu)
Manganese	7439-96-5	0.05-2.0	5 mg/m ³ (C) - Fume & Mn compounds	0.2 mg/m ³
Molybdenum	7439-98-7	≤ 0.25 max.	15 mg/m ³ - Total dust (as Mo)	10 mg/m ³ - Metal & insoluble compounds (Inhalable fraction) 3 mg/m ³ - Metal & insoluble fraction (Respirable fraction)
Nickel	7440-02-0	≤ 0.3 max.	1 mg/m ³ - Metal & insoluble compounds (as Ni)	1.5 mg/m ³ - Elemental nickel (as Ni) 0.2 mg/m ³ - Insoluble compounds (NOS) ⁷
Phosphorus	7723-14-0	≤ 0.1 max.	0.1 mg/m ³	0.1 mg/m ³
Silicon	7440-21-3	≤ 1.00 max.	15 mg/m ³ - Total dust 5 mg/m ³ - Respirable fraction	10 mg/m ³
Sulfur	7704-34-9	≤ 0.04 max.	15 mg/m ³ - Total dust (PNOR) 5 mg/m ³ - Respirable fraction (PNOR)	10 mg/m ³ - Inhalable fraction (PNOS) 3 mg/m ³ - Respirable fraction (PNOS)
Tin	7440-31-5	≤ 0.01 max.	2 mg/m ³ - Tin metal (as Sn)	2 mg/m ³ - Inorganic compounds (except oxides) (as Sn)
Titanium	7440-32-6	≤ 0.15 max.	15 mg/m ³ - Total dust (PNOR) 5 mg/m ³ - Respirable fraction (PNOR)	10 mg/m ³ (Titanium dioxide)
Vanadium	7440-62-2	≤ 0.15 max	0.5 mg/m ³ (C) - Respirable fraction as V ₂ O ₅ 0.1 mg/m ³ (C) - Fume (as V ₂ O ₅)	0.05 mg/m ³ - Dust or fume (as V ₂ O ₅)

Notes:

- Hot or Cold Rolled Steel Sheet/Strip surfaces may be treated with small amounts of corrosion-inhibiting oil.
- All commercial steel products contain small amounts of various elements in addition to those specified. These small quantities frequently referred to as "trace" or "residual" elements, generally originate in the raw materials used. Individual trace elements vary in concentration by weight, and may include antimony, arsenic, cadmium, cobalt, lead, and zirconium.

¹ OSHA Permissible Exposure Limits (PELs) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A ("C") designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during a workday.

² Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted.

³ PNOR (Particulates Not Otherwise Regulated). All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the PNOR limit which is the same as the inert or nuisance dust limit of 15 mg/m³ for total dust and 5 mg/m³ for the respirable fraction.

⁴ Inhalable fraction. The concentration of inhalable particulate for the application of this TLV is to be determined from the fraction passing a size-selector with the characteristics defined in the ACGIH TLVs and BEIs Appendix D, paragraph A.

⁵ PNOS (Particulates Not Otherwise Specified). Particulates identified under the PNOS heading are "nuisance dusts" containing no asbestos and <1% crystalline silica. A TWA-TLV of 10 mg/m³ for inhalable particulate and 3 mg/m³ for respirable particulate has been recommended.

⁶ Respirable fraction. The concentration of respirable dust for the application of this limit is to be determined from the fraction passing a size-selector with the characteristics defined in the ACGIH TLVs and BEIs Appendix D, paragraph C.

⁷ NOS. Not otherwise specified.

Section 3 - Hazards Identification**☆☆☆☆☆ Emergency Overview ☆☆☆☆☆**

This formed solid metal product poses little or no immediate health or fire hazard. When product is subjected to welding, burning, melting, sawing, brazing, grinding or other similar processes, potentially hazardous airborne particulate and fumes may be generated. These operations should be performed in well-ventilated areas. Avoid inhalation of metal dusts and fumes. Iron or steel foreign bodies imbedded in the cornea of the eye will produce rust stains unless removed fairly promptly. If appropriate, respiratory protection and other personal protective equipment should be used.

Potential Health Effects

Primary Entry Routes: Inhalation and skin, if coated. Steel products in the natural state do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing, machining and grinding may result in the following effects if exposures exceed recommended limits as listed in Section 2.

Target Organs: Respiratory system

Acute Effects:

- **Inhalation:** Excessive exposure to high concentrations of dust may cause irritation to the eyes, skin and mucous membranes of the upper respiratory tract. Excessive inhalation of fumes of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms), metallic taste in the mouth, dryness and irritation of the throat followed by weakness and muscle pain. The symptoms come on in a few hours after excessive exposures and usually last from 12 to 48 hours. Long-term effects from metal fume fever have not been noted. Freshly formed oxide fumes of manganese and copper have been associated with causing metal fume fever. Inhalation of chromium compounds may cause upper respiratory tract irritation. Sulfur compounds, present in generated fumes, may irritate the gastrointestinal tract. Boron oxide, molybdenum, nickel, phosphorus oxide and vanadium compounds, especially vanadium pentoxide, are respiratory tract irritants. Excessive inhalation of calcium oxide dusts may cause severe irritation and burns of the respiratory tract.
- **Eye:** Particles of iron or iron compounds, which become imbedded in the eye, may cause siderosis with varied side effects. Torchong or burning operations on steel products with surface treatments, oil coatings, or acrylic films may produce emissions that can be irritating to the eyes. Sulfur compounds, present in generated fumes, may irritate the eyes. Calcium oxide, molybdenum and vanadium compounds, especially vanadium pentoxide, are eye irritants.
- **Skin:** Skin contact with metallic fumes and dusts may cause physical abrasion. Sulfur compounds, present in generated fumes, may irritate the skin. Calcium oxide, chromium, molybdenum and vanadium compounds, especially vanadium pentoxide, are skin irritants. Exposure to nickel may cause contact and atopic dermatitis and allergic sensitization. Repeated or prolonged contact with chemical surface treatments or oil residue may cause skin irritation, dermatitis, ulceration or allergic reactions in sensitized individuals.
- **Ingestion:** Ingestion of harmful amounts of this product as distributed is unlikely due to its solid insoluble form. Ingestion of dust may cause nausea or vomiting.

Chronic Effects: Chronic inhalation of metallic fumes and dusts are associated with the following conditions:

- **IRON OXIDE:** Chronic inhalation of excessive concentrations of iron oxide fumes or dusts may result in the development of a benign pneumoconiosis, called siderosis, which is observable as an X-ray change. No physical impairment of lung function has been associated with siderosis. Inhalation of excessive concentrations of ferric oxide may enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Iron oxide is listed as a Group 3 (not classifiable) carcinogen by IARC.
- **ALUMINUM:** Aluminum dusts/fines are a low health risk by inhalation and should be treated as a nuisance dust. Aluminum dust is a respiratory and eye irritant.
- **BORON:** Boron oxide dusts and fumes may cause upper respiratory tract and eye irritation, dryness of the mouth, nose or throat, and sore throat and productive cough.
- **CALCIUM:** Depending on the concentration and duration of exposure, repeated or prolonged inhalation may cause inflammation of the respiratory passages, ulcers of the mucous membranes, and possible perforation of the nasal septum. Repeated or prolonged skin contact may cause dermatitis.
- **CARBON:** Chronic inhalation of high concentrations to carbon may cause pulmonary disorders.
- **CHROMIUM:** The health hazards associated with exposure to chromium are dependent upon its oxidation state. The metal form (chromium as it exists in this product) is of very low toxicity. The hexavalent form is very toxic. Repeated or prolonged exposure to hexavalent chromium compounds may cause respiratory irritation, nosebleed, ulceration and perforation of the nasal septum. Industrial exposure to certain forms of hexavalent chromium has been related to an increased incidence of cancer. The National Toxicology Program (NTP) Fourth Annual report on Carcinogens cites "certain Chromium compounds" as human carcinogens. ACGIH has reviewed the toxicity data and concluded that chromium metal is not classifiable as a human carcinogen.
- **COLUMBIUM:** No reports of human intoxication. There is no evidence of a human health hazard due to inhalation. Can cause eye and skin irritation.

- **COPPER:** Inhalation of high concentrations of freshly formed oxide fumes and dusts of copper can cause metal fume fever. Chronic inhalation of copper dust has caused, in animals, hemolysis of the red blood cells, deposition of hemofuscin in the liver and pancreas, injury to lung cells and gastrointestinal symptoms.
- **MANGANESE:** Chronic exposure to high concentrations of manganese fumes and dusts may adversely affect the central nervous system with symptoms including languor, sleepiness, weakness, emotional disturbances, spastic gait, mask-like facial expression and paralysis. Animal studies indicate that manganese exposure may increase susceptibility to bacterial and viral infections.
- **MOLYBDENUM:** Certain handling operations, such as burning and welding, may generate both insoluble molybdenum compounds (metal and molybdenum dioxide) and soluble molybdenum compounds (molybdenum trioxide). Molybdenum compounds generally exhibit a low order of toxicity with the trioxide the more toxic. However, some reports indicate that the dust of the molybdenum metal, molybdenum dioxide and molybdenum trioxide may cause eye, skin, nose and throat irritation in animals.
- **NICKEL:** Exposure to nickel dusts and fumes can cause sensitization dermatitis, respiratory irritation, asthma, pulmonary fibrosis, edema and may cause nasal or lung cancer in humans. IARC lists nickel and certain nickel compounds as Group 2B carcinogens (sufficient animal data). ACGIH 2001 TLVs® and BEIs® lists insoluble nickel compounds as confirmed human carcinogens.
- **PHOSPHOROUS:** Inhalation of phosphorous oxides may cause respiratory irritation.
- **SILICON:** Silicon dusts are a low health risk by inhalation and should be treated as a nuisance dust. Eye contact with pure material can cause particulate irritation. Skin contact with silicon dusts may cause physical abrasion.
- **SULFUR:** Sulfur compounds, present in the fumes, may irritate the skin, eyes, lungs and gastrointestinal tract.
- **TIN:** No systemic effects have been reported from industrial exposure to tin. However, exposure to dust and fume of tin (oxide) is recognized to result in a benign pneumoconiosis called stannosis. No cases of massive fibrosis from over-exposure to tin have been reported.
- **TITANIUM:** There is no evidence of a health hazard from inhalation of titanium dioxide at airborne concentrations below 10 mg/m³. The toxicity of titanium dioxide has been found to be relatively inert. Eye contact with pure material can cause particulate irritation. Skin contact with titanium dusts may cause physical abrasion.
- **VANADIUM:** Excessive long term or repeated exposures to vanadium compounds, especially the pentoxide, may result in chronic pulmonary changes such as emphysema or bronchitis.

Long-term inhalation exposure to high concentrations (over-exposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects.

Carcinogenicity: IARC, NTP, and OSHA do not list steel products as carcinogens. The International Agency for Research on Cancer (IARC) identifies nickel and certain nickel compounds and welding fumes as Group 2B carcinogens that are possibly carcinogenic to humans. IARC lists chromium metal and trivalent chromium compounds as Group 3 carcinogens, not classifiable as to their human carcinogenicity. Hexavalent chromium compounds are listed by IARC as Group 1 carcinogens that are carcinogenic to humans.

Medical Conditions Aggravated by Long-Term Exposure: Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Chemical Surface Treatments/Coatings: The possible presence of chemical surface treatments and oil coatings should be considered when evaluating potential employee health hazards and exposures during handling and welding or other fume generating activities. Removal of surface coatings should be considered prior to such activities. Repeated or prolonged contact with chemical surface treatments or oil residue may cause skin irritation, dermatitis, ulceration or allergic reactions in sensitized individuals. Torching or burning operations on steel products with surface treatments, oil coatings or acrylic films may produce emissions that can be irritating to the eyes and respiratory tract. Inhalation of hexavalent chromium compounds may cause ulceration of the mucous membranes of the nasal septum and has been related to an increased incidence of lung cancer (IARC Group 1).

SARA Potential Hazard Categories: Immediate Acute Health Hazard, Delayed Chronic Health Hazard.

Section 4 – First Aid Measures

Inhalation: For over-exposure to airborne fumes and particulate, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly. Metal fume fever may be treated by bed rest, and administering a pain and fever reducing medication.

Eye Contact: Flush with large amounts of clean water to remove particles. Seek medical attention if irritation persists.

Skin Contact: Remove contaminated clothing. Wash affected areas with soap or mild detergent and water. If thermal burn has occurred, flush area with cold water and seek medical attention. If mechanical abrasion has occurred, seek medical attention.

Ingestion: Not a probable route of industrial exposure. However, if ingested, seek medical attention immediately.

Section 5 - Fire-Fighting Measures

Flash Point: Not applicable

LEL: Not applicable

Flash Point Method: Not applicable**UEL:** Not applicable**Burning Rate:** Not applicable**Auto-ignition Temperature:** Not applicable**Flammability Classification:** Non-flammable, non-combustible**Extinguishing Media:** Not applicable for solid product. Use extinguishers appropriate for surrounding materials.**Unusual Fire or Explosion Hazards:** Not applicable for solid product. Do not use water on molten metal.**Hazardous Combustion Products:** At temperatures above the melting point, fumes containing metal oxides and other alloying elements may be liberated. If present, the resin on the product line may yield noxious gases such as the oxides of carbon.**Fire-Fighting Instructions:** Do not release runoff from fire control methods to sewers or waterways.**Fire-Fighting Equipment:** Wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode and full protective clothing.

Section 6 – Accidental Release Measures

Spill/Leak Procedures: Not applicable to steel in solid state. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust. Fine, dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid using compressed air. Do not release into sewers or waterways. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations.**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.**Disposal:** Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 7 – Handling and Storage

Handling Precautions: Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Practice good housekeeping. Avoid breathing metal fumes and/or dust.**Storage Requirements:** Store away from acids and incompatible materials.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use controls as appropriate to minimize exposure to metal fumes and dusts during handling operations.**Ventilation:** Provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.**Administrative Controls:** Do not use compressed air to clean-up spills.**Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen.**Protective Clothing/Equipment:** For operations which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use protective clothing, gloves and safety glasses to prevent skin and eye contact. Contact lenses should not be worn where industrial exposures to this material are likely. Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations. Protective gloves should be worn as required for welding, burning or handling operations. Where the oil coating is applied to the product, wear gloves when handling, do not continue to use gloves or work clothing that has become saturated or soaked through with oil coating. Wash skin that has been exposed to oil with soap and water or waterless hand cleaner.

Section 9 - Physical and Chemical Properties

Physical State: Solid**Water Solubility:** Insoluble**Appearance and Odor:** Metallic Gray, Odorless**Other Solubilities:** Not applicable**Odor Threshold:** Not applicable**Boiling Point:** Not applicable**Vapor Pressure:** Not applicable**Viscosity:** Not applicable**Vapor Density (Air=1):** Not applicable**Refractive Index:** Not applicable**Formula Weight:** Not applicable**Surface Tension:** Not applicable**Density:** 7.85**% Volatile:** Not applicable**Specific Gravity (H₂O=1, at 4 °C):** 7.85**Evaporation Rate:** Not applicable**pH:** Not applicable**Freezing/Melting Point:** Base Metal – 2750 °F

Section 10 - Stability and Reactivity

Stability: Steel products are stable under normal storage and handling conditions.**Polymerization:** Hazardous polymerization cannot occur.

Chemical Incompatibilities: Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.

Conditions to Avoid: Storage with strong acids or calcium hypochlorite

Hazardous Decomposition Products: Thermal oxidative decomposition of steel products can produce fumes containing oxides of iron and manganese as well as other elements. If present, the resin on the product line may yield noxious gases such as the oxides of carbon upon thermal oxidative decomposition.

Section 11- Toxicological Information

Toxicity Data: *

No information is available for the product as a mixture. The possible presence of chemical surface treatments and oil coatings should be considered when evaluating potential employee health hazards and exposures during handling and welding or other fume generating activities.

Eye Effects:

Eye contact with the individual components may cause particulate irritation. Implantation of iron particles in guinea pig corneas have resulted in rust rings with corneal softening about rust ring.

Skin Effects:

Skin contact with the individual components may cause physical abrasion, irritation, dermatitis, ulcerations and sensitizations.

Acute Inhalation Effects:

Inhalation of the individual alloy components has been shown to cause various respiratory effects.

Acute Oral Effects:

No data available

Other: No LC50 or LD50 has been established for the mixture as a whole.

Iron LD50: 30 g/kg oral (rat). Aluminum LD50: No data. Boron LD50: 2000 mg/kg orl (mouse). Calcium LD50: No data. Carbon LD50: No data. Chromium LD_{Lo}: 71 mg/kg GIT orl (human). Columbium LD50: No data. Copper LD_{Lo}: 120 ug/kg GIT ipl (rat). Manganese LD50: 9 g/kg oral (rat). Molybdenum LD_{Lo}: 114 mg/kg ipr (rat). Nickel LD_{Lo}: 5 mg/kg orl (guinea pig). Phosphorous LD50: No data. Silicon LD50: No data. Sulfur LD50: No data. Tin LD50: No data. Titanium LD50: No data. Vanadium LD50: 59 mg/kg scu (rabbit).

Chronic Effects: See section 3.

Carcinogenicity: Chromium and Nickel

Mutagenicity: No data available

Teratogenicity: No data available

* See NIOSH, *RTECS* (NO7400000), for additional toxicity data on iron oxide, (BD1200000) for aluminum oxide, (EV8040000) for calcium, (ED7350000) for boron, (FF5250000) for carbon, (GB5425000) for chromium, (GL5325000) for copper, (OO9275000) for manganese, (QA4680000) for molybdenum, (QR5950000) for nickel, (TH3500000) for phosphorous, (WM0400000) for silicon, (WS4250000) for sulfur, (XP7320000) for tin, (XR1700000) for titanium, (YW2460000) for vanadium pentoxide.

Section 12 - Ecological Information

Ecotoxicity: No data available for the product as a whole. However, individual components of the product have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife.

Environmental Fate: No data available.

Environmental Degradation: No data available.

Soil Absorption/Mobility: No data available for the product as a whole. However, individual components of the product have been found to be absorbed by plants from soil.

Section 13 - Disposal Considerations

Disposal: This material is considered to be a solid waste, not a hazardous waste. Follow applicable Federal, state, and local regulations for disposal of solid waste and airborne particulates accumulated during handling operations of the product.

Disposal Regulatory Requirements: None

Container Cleaning and Disposal: Follow applicable Federal, state and local regulations. Observe safe handling pre-cautions.

Section 14 - Transport Information**DOT Transportation Data (49 CFR 172.101):**

Hot or Cold Rolled Steel Sheet/Strip is not listed as a hazardous substance under 49 CFR 172.101.

Shipping Name: Not applicable	Packaging Authorizations	Quantity Limitations
Shipping Symbols: Not applicable	a) Exceptions: None	a) Passenger, Aircraft, or Railcar: Not applicable
Hazard Class: Not applicable	b) Non-bulk Packaging: Not applicable	b) Cargo Aircraft Only: Not applicable
ID No.: Not applicable	c) Bulk Packaging: Not applicable	Vessel Stowage Requirements
Packing Group: Not applicable		a) Vessel Stowage: Not applicable
Label: Not applicable		b) Other: Not applicable
Special Provisions (172.102): None		

Section 15 – Regulatory Information

Regulatory Information: *The following listing of regulations relating to an ISG Indiana Harbor, Inc. product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

This product and/or its constituents are subject to the following regulations:

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): The product as a whole is not listed. However, individual components of the product are listed.

EPA Regulations:

RCRA: Chromium and Nickel are regulated under this act.

CERCLA Hazardous Substance (40 CFR 302.4): The product as a whole is not listed. However, individual components of the product are listed: Chromium, Copper, Manganese compounds, Nickel and Phosphorous are listed under SARA 302.

SARA 311/312 Codes: Immediate (acute) health hazard and delayed (chronic) health hazard.

SARA 313: Aluminum (fume or dust), Chromium, Copper, Manganese, Nickel and Phosphorous are subject to SARA 313 reporting requirements. Please also note that if you prepackage or otherwise redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

Clean Water Act: Chromium, Copper and Nickel are Section 307 Priority Pollutants. Phosphorus is a Section 311 hazardous chemical.

Safe Drinking Water Act: Aluminum, Boron, Chromium, Copper, Molybdenum, Nickel and Vanadium are regulated under this act.

State Regulations: The product as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations.

Pennsylvania Right to Know: Contains regulated material in the following categories:

- Hazardous Substances: Calcium, Molybdenum, Silicon, Sulfur and Tin.
- Environmental Hazards: Aluminum, Chromium, Copper, Manganese, Nickel, Phosphorous and Vanadium.
- Special Hazard Substances: Chromium and Nickel

New Jersey Right to Know: Contains regulated material in the following categories:

- Environmental Hazardous Substance: Aluminum (fume or dust), Chromium, Copper, Manganese, Nickel, Phosphorous and Vanadium (fume or dust)
- Special Health Hazard Substances: Not regulated.

California Prop. 65: Nickel is a material known to cause cancer or reproductive toxicity.

Other Regulations: The product as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations.

WHMIS (Canadian): D2B Product Classification.

Section 16 – Other Information

Prepared By: ISG Indiana Harbor, Inc.

Hazard Rating Systems:

NFPA Code: 0-0-0

HMIS Code: 0-0-0 PPE: See Section 8

Disclaimer: This information is taken from sources or based upon data believed to be reliable. However, ISG Indiana Harbor, Inc. makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.