United States Steel Corporation

Material Safety Data Sheet

USS Code Number: 4H018
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Section 1 - Chemical Product and Company Identification

Product/Chemical Name: **Standard Pipe – HSLA Steel**

Manufacturer: United States Steel Corporation, 600 Grant Street, Room 2514H, Pittsburgh, PA 15219-2800
General Information: (412) 433-6840 (8:00 am to 5:00 pm); FAX: (412) 433-5016
Off-Hour Emergency Phone Number: (412) 433-5811

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	Percentage by wt.	OSHA PEL [1]	ACGIH TLV [2]
Base Metal				
Iron	7439-89-6	97-99	10 mg/m³ - Iron oxide fume	5 mg/m³ - Iron oxide dust and fume
Alloying Elements				
Aluminum	7429-90-5	0.02-0.04	15 mg/m³ - Total dust 5 mg/m³ - Respirable fraction	10 mg/m³ - Metal Dust 5 mg/m³ - Welding fume
Boron	7440-42-8	0.0007 max.	15 mg/m³ - Total dust (as Boron oxide)	10 mg/m³ - Boron oxide
Carbon	7440-44-0	0.13-0.31	15 mg/m³ -Total dust (PNOR) [3] 5 mg/m³ - Respirable fraction (PNOR)	10 mg/m³ - Inhalable fraction[4] (PNOS) [5] 3 mg/m³ - Respirable fraction[6] (PNOS)
Chromium	7440-47-3	0.28 max.	1 mg/m³ - Chromium metal	0.5 mg/m³ - Cr metal & Cr III compounds
Columbium	7440-03-1	0.035 max.	15 mg/m³ - Total dust (PNOR) 5 mg/m³ - Respirable fraction (PNOR)	10 mg/m³ - Inhalable fraction (PNOS) 3 mg/m³ - Respirable fraction (PNOS)
Copper	7440-50-8	0.15 max.	0.1 mg/m³ - Fume (as Cu) 1 mg/m³ - Dusts & mists (as Cu)	0.2 mg/m³ – Fume 1 mg/m³ – Dusts & mists (as Cu)
Manganese	7439-96-5	0.45-1.30	5 mg/m³ (C) - Fume & Mn compounds	0.2 mg/m³
Molybdenum	7439-98-7	0.10 max.	15 mg.m³ - Total dust (as Mo)	10 mg/m³ - Metal & insoluble compounds (Inhalable fraction) 3 mg/m³ - Metal & insoluble fraction (Respirable fraction)
Nickel	7440-02-0	0.20 max.	1 mg/m³ - Metal & insol. compounds (as Ni)	1.5 mg/m³ - Elemental nickel (as Ni) 0.2 mg/m³ - Insoluble compounds (NOS)[7]
Phosphorus	8049-19-2	0.17 max.	15 mg/m³ - Total dust (PNOR) 5 mg/m³ - Respirable fraction (PNOR)	10 mg/m³ - Inhalable fraction (PNOS) 3 mg/m³ - Respirable fraction (PNOS)
Silicon	7440-21-3	0.16-0.35	15 mg/m³ - Total dust 5 mg/m³ - Respirable fraction	10 mg/m³
Sulfur	7704-34-9	0.015 max.	15 mg/m³ - Total dust (PNOR) 5 mg/m³ - Respirable fraction (PNOR)	10 mg/m³ - Inhalable fraction (PNOS) 3 mg/m³ - Respirable fraction (PNOS)
Vanadium	7440-62-2	0.10 max.	0.5 mg/m³ (C) – Respirable fraction as V_2O_5 0.1 mg/m³ (C) – Fume (as V_2O_5)	0.05 mg/m³ - Dust or fume (as V_2O_5)

Notes:

- Steel tubular products may be coated with varnish, generally at the customer's specification, to inhibit corrosion.
- All commercial steel products may contain small amounts of various elements in addition to those specified. These small quantities (less than 0.1%) may exist as intentional additions, or as "trace" or "residual" elements that generally originate in the raw materials used. These elements may include: aluminum, antimony, arsenic, boron, cadmium, calcium, chromium, cobalt, columbium, copper, lead, molybdenum, nickel, silicon, tin, titanium, vanadium, 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/m^3 for total dust and 5 mg/m^3 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/m^3 for inhalable particulate and 3 mg/m^3 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. Avoid inhalation of metal dusts and fumes. Operations having the potential to generate airborne particulates should be performed in well ventilated areas and, if appropriate, respiratory protection and other personal protective equipment should be used. Iron or steel foreign bodies imbedded in the cornea of the eye may produce rust stains unless removed fairly promptly.

Potential Health Effects

Primary Entry Routes: Inhalation. 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.
- **Eye:** Excessive exposure to high concentrations of dust may cause irritation to the eyes. Particles of iron or iron compounds, which become imbedded in the eye, may cause rust stains unless removed fairly promptly.
- **Skin:** Skin contact with dusts may cause irritation or sensitization, possibly leading to dermatitis.
- **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.
- ALUMINUM: Aluminum dusts/fines are a low health risk by inhalation and should be treated as a nuisance dust.

- 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.
- 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 relatively low toxicity. Long term excessive inhalation of ferrochromium dusts and fumes may cause lung changes in exposed workers. Exposure to chromium metal does not give rise to pulmonary fibrosis or pneumoconiosis. 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 respiratory cancer.
- COLUMBIUM: No reports of human intoxication. There is no evidence of a human health hazard due to inhalation.
- COPPER: Chronic exposure to copper dusts may result in runny nose, irritation of mucous membranes, and atrophic changes with resultant dementia. 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: Exposure may result in anemia, hyperthyroidism, and abnormal liver function tests. Headache, muscle and/or joint pain, weakness, fatigue, anorexia, impaired pulmonary function, renal dysfunction, skin/hair changes, dry cough and chest pains have been reported following long-term inhalation exposure.
- 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. Respiratory cancer risks primarily relate to chronic exposure to soluble nickels at concentrations in excess of 1 mg Ni/m^3 and exposure to the less soluble forms at concentrations greater than 10 mg Ni/m^3. Metallic nickel does not appear to pose such a threat.
- PHOSPHOROUS: Inhalation of dusts and fumes of ferrophosphorus and phosphorous oxides may cause respiratory irritation.
- SILICON: Silicon dusts are a low health risk by inhalation and should be treated as a nuisance dust.
- SULFUR: Sulfur compounds, present in the fumes, may irritate the skin, eyes, lungs and gastrointestinal tract.
- 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.

Chemical Surface Treatments/Coatings: The possible presence of a varnish coating should be considered when evaluating potential employee health hazards and exposures during welding or other fume generating activities. Torching or burning operations on steel products with a varnish coating may produce emissions that can be irritating to the eyes and respiratory tract.

Carcinogenicity: The International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), and OSHA do not list steel products as carcinogens. IARC identifies nickel compounds as Group 1 (sufficient evidence for carcinogenicity in humans) and metallic nickel as Group 2B (possibly carcinogenic for humans). NTP lists nickel as Group 2 (reasonably anticipated to be a human carcinogen). The American Conference of Governmental Industrial Hygienists (ACGIH) lists insoluble nickel compounds as A1 (confirmed human carcinogen) and elemental/metallic nickel as A5 (not suspected as a human carcinogen). IARC lists chromium metal and trivalent chromium compounds as Group 3 (not classifiable as to their human carcinogenicity). ACGIH lists chromium metal and trivalent compounds as A4 (not classifiable as a human carcinogen). IARC identifies welding fumes as a Group 2B carcinogen, a mixture that is possibly 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.

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
Flash Point Method: Not applicable
Burning Rate: Not applicable
LEL: Not applicable
UEL: 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. Where a varnish coating is present, thermal decomposition may yield particulates which are irritating to the eyes and respiratory tract and noxious gases such as the oxides of carbon and nitrogen.
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.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance and Odor: Metallic Gray, Odorless
Odor Threshold: Not applicable
Vapor Pressure: Not applicable
Vapor Density (Air=1) : Not applicable
Formula Weight: Not applicable
Density: 7.85 gm/cc
Specific Gravity (H_2O=1, at 4 °C): 7.85
pH: Not applicable
Water Solubility: Insoluble
Other Solubilities: Not applicable
Boiling Point: Not applicable
Viscosity: Not applicable
Refractive Index: Not applicable
Surface Tension: Not applicable
% Volatile: Not applicable
Evaporation Rate: Not applicable
Freezing/Melting Point: ~2750 ºF

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, manganese, chromium and other alloying elements. Where present, a varnish coating may yield irritating particulates and noxious gases such as oxides of carbon and nitrogen upon thermal oxidative decomposition.

Section 11 - Toxicological Information

No information is available for the product as a mixture. The possible presence of a varnish coating should be considered when evaluating potential employee health hazards and exposures during 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, and sensitization.

Toxicity Data:*

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 oral (mouse). Carbon LD50: No data. Chromium LD_{Lo}: 71 mg/kg oral (human). Columbium LD50: No data. Copper TD_{Lo}: 120 ug/kg oral (human). Manganese LD50: 9 g/kg oral (rat). Molybdenum LD_{Lo}: 70 mg/kg intratraecheal (rabbit). Nickel LD_{Lo}: 5 mg/kg oral (guinea pig). Phosphorous LD50: No data. Silicon LD50: 3160 mg/kg oral (rat). Sulfur LD50: >8437 mg/kg oral (rat). Vanadium LD50: 59 mg/kg scu (rabbit).
Chronic Effects: See Section 3.
Carcinogenicity: Nickel. See Section 3.
Mutagenicity: No data available
Teratogenicity: No data available

- See NIOSH, *RTECS* (NO4565500) for additional toxicity data on iron, (BD0330000) for aluminum, (ED7350000) for boron, (FF5250100) for carbon, (GB4200000) for chromium, (QT9900000) for columbium, (GL5325000) for copper, (OO9275000) for manganese, (QA4680000) for molybdenum, (QR5950000) for nickel, (VW0400000) for silicon, (WS4250000) for sulfur, (YW1355000) for vanadium.

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: Steel scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.
Container Cleaning and Disposal: Follow applicable Federal, state and local regulations. Observe safe handling precautions.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Steel tubular products are not listed as hazardous substances under 49 CFR 172.101.

Shipping Name: Not applicable
Shipping Symbols: Not applicable
Hazard Class: Not applicable
ID No.: Not applicable
Packing Group: Not applicable
Label: Not applicable
Special Provisions (172.102): None

Packaging Authorizations
a) Exceptions: None
b) Non-bulk Packaging: Not applicable
c) Bulk Packaging: Not applicable

Quantity Limitations
a) Passenger, Aircraft, or Railcar: Not applicable
b) Cargo Aircraft Only: Not applicable

Vessel Stowage Requirements
a) Vessel Stowage: Not applicable
b) Other: Not applicable

Section 15 - Regulatory Information

Regulatory Information: *The following listing of regulations relating to a United States Steel Corporation 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(40CFR261): Steel scrap is not regulated as a solid waste or a hazardous waste under this act. If product dusts and/or fumes from processing operations are not recycled, they are considered to be a solid waste and may be classified as a hazardous waste depending on the toxicity characteristics of the dust as defined within 40CFR261.24.

CERCLA Hazardous Substance (40 CFR 302.4): The product as a whole is not listed. However, individual components of the product are listed: Chromium (Reportable Quantity (RQ)-5000#), Copper (RQ-5000#), and Nickel (RQ-100#). Manganese compounds are also listed although no reportable quantity is assigned to this generic or broad class.

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard.

SARA 313(40CFR372.65): Chromium, Manganese and Nickel are subject to SARA 313 reporting requirements. Please note that if you prepackage or redistribute this product to industrial customers, SARA 313 requires that a notice be sent to those customers.

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: Molybdenum, Silicon and Sulfur.
- Environmental Hazards: Aluminum, Chromium, Copper, Manganese, Nickel and Vanadium (fume or dust).
- Special Hazard Substances: Chromium and Nickel.

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

- Hazardous Substance: Aluminum (dust and fume), Copper, Manganese, Molybdenum, Sulfur and Vanadium (dust and fume).
- Special Health Hazard Substances: Chromium and Nickel.

California Prop. 65: Nickel is the only listed component known to the State of California to cause cancer. However, the product may also possibly contain trace quantities (generally much less than 0.1%) of other metallic elements known to the State of California to cause cancer or reproductive toxicity. These include arsenic (inorganic), cadmium and lead.

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 Classification (Canadian): D-2

Section 16 - Other Information

Prepared By: United States Steel Corporation

Hazard Rating Systems:

NFPA Code: 0-0-0
HMIS Code: 1*-0-0 PPE: See Section 8 * Denotes possible chronic hazard if airborne dusts or fumes are generated.

Disclaimer: All information, recommendations, and suggestions appearing herein concerning this product are taken from sources or based upon data believed to be reliable. Although reasonable care has been taken in the preparation of this information, United States Steel Corporation extends no warranties or guarantees, express or implied, makes no representations, and assumes no responsibility as to the accuracy, reliability or completeness of the information presented. Since the actual use of the product described herein is beyond our control, United States Steel Corporation assumes no liability arising out of the use of the product by others. It is the user's responsibility to determine the suitability of the information presented herein, to assess the safety and toxicity of the product under their own conditions of use, and to comply with all applicable laws and regulations. Appropriate warnings and safe handling procedures should be provided to handlers and users.

HAZARDOUS COMMUNICATION LABEL

ALLOY STEEL
HIGH STRENGTH LOW ALLOY STEEL
HIGH STRENGTH STEEL

WARNING! CANCER HAZARD (CONTAINS NICKEL).
EXPOSURE TO HIGH CONCENTRATIONS OF DUST OR FUME DURING WELDING, BURNING, MELTING, CUTTING, BRAZING, GRINDING AND POSSIBLY MACHINING, ETC., MAY PRODUCE IMMEDIATE OR DELAYED DAMAGE TO LUNGS OR OTHER ORGANS.
THIS PRODUCT MAY BE COATED WITH MATERIALS THAT COULD RESULT IN SKIN IRRITATION WITH PROLONGED CONTACT.

PRECAUTIONS: AVOID BREATHING OR INGESTING DUST OR FUME. ADEQUATE VENTILATION IS REQUIRED WHILE WELDING, BURNING, MELTING, CUTTING, BRAZING, GRINDING AND MACHINING.
AVOID SKIN CONTACT IF MATERIAL IS COATED.

FIRST AID: FOR OVEREXPOSURE TO AIRBORNE DUST AND FUME, REMOVE EXPOSED PERSON TO FRESH AIR. IF BREATHING IS DIFFICULT OR HAS STOPPED, ADMINISTER ARTIFICIAL RESPIRATION OR OXYGEN AS INDICATED. SEEK MEDICAL ATTENTION PROMPTLY.
IF PRODUCT IS COATED AND EXCESSIVE SKIN CONTACT OCCURS, WASH WITH SOAP AND WATER. IF IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION.

ADDITIONAL INFORMATION: REFER TO MATERIAL SAFETY DATA SHEETS USS CODE NOS. 1H001, 1A001, 1H004, 1A004, 3H011, 3A017, 4H018, 4A018, 4H019, 4A019, 4H020, 4A020 FOR FURTHER INFORMATION ON SPECIFIC PRODUCTS.

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