Metal Products

Revised Date: 8/13/09

Phillips Manufacturing's metal products are finished products (articles) manufactured from steel. Vendor steel mills supplied the below information.

Section 1. - Product and Company Identification

Product Name: Metal Drywall Accessories
Trade Mark: Phillips
Chemical Name: Metal Coated Steel, Painted Coated Steel (includes Electrogalvanized, Hot Dipped Galvanized, Aluminized Sheet, Painted Sheet)

Manufacturer Name: Phillips Manufacturing Co.
Address: 4949 S. 30th Street, Omaha NE, 68107
Phone Number: (402) 339-3800
Product Use: Drywall Trim Accessories

Section 2. - Composition/Information on Regulated Ingredients

Base Metal				
Ingredient Name	**CAS-No.**	**Percentage by wt.**	**OSHA PEL[1]**	**ACGIH TLV[2]**
Iron	7439-89-6	95-99.9	10mg/m^3-Iron oxide fume	5mg/m^3-Iron oxide dust and fume
Aluminum	7429-90-5	0.01-0.5	15 mg/m^3-Total dust 5mg/m^3-Respirable fraction	10mg/m^3-Metal dust 5 mg/m^3-Welding fume
Carbon	7440-44-0	0.001-0.6	15mg/m^3-Total dust (PNOR)[3] 5mg/m^3 – Respirable fraction (PNOR)	10mg/m^3 – Inhalable fraction[4] (PNOS)[5] 3 mg/m^3-Respirable fraction[6](PNOS)
Chromium	7440-47-3	0-0.7	1 mg/m^3 – Chromium metal	0.5 mg/m^3 – Chromium metal & Cr lll compounds
Copper	7440-50-8	0.005-0.4	0.1 mg/m^3 – Fume (as Cu) 1mg/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	5mg/m^3 (C) – Fume & Mn compounds	0.2 mg/m^3
Nickel	7440-02-0	0.004-0.5	1mg/m^3 – Metal & Insoluble compounds (as Ni)	1.5 mg/m^3 – Elemental nickel (as Ni) 0.2 mg/m^3 – Insoluble compounds
Silicon	7440-21-3	0.001-1.05	15mg/m^3 – Total Dust 5mg/m^3 – Respirable fraction	10 mg/m^3

Notes:

- All steel products contain small amounts of various elements in addition to those listed, and they are referred to as trace elements. These trace elements are in the steel naturally. Typical Amounts are as follows:

Boron	≤0.005 max, typically 0.001%	Calcium	≤0.005 max, typically 0.0003%
Columbium	≤0.15 max, typically 0.002%	Molybdenum	≤0.4 max typically 0.006%
Phosphorous	≤0.1 max, typically 0.01%	Sulfur	≤0.04 max, typically 0.007%
Tin	≤0.03 max, typically 0.002%	Titanium	≤0.15 max, typically 0.002%
Vanadium	≤0.15 max, typically 0.001%		

- Percentages are shown as max and typical concentrations of trace elements for the purpose of showing the potential hazards of the finished product.

[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 a limit which is the same as the inert or nuisance dust limit of 15mg/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 Appedix D, paragragh 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.

Metallic Coating (If applicable)[1]				
Ingredient Name	**CAS Number**	**Percentage by wt.[2]**	**OSHA PEL**	**ACGIH TLV**
Aluminum	7429-90-5	0-85	15mg/m^3 - Total dust 5mg/m^3 - Respirable fraction	10mg/m^3 - Metal dust as Al 5mg/m^3 - Fume as Al
Nickel (Ni) ZnNi EG	7440-02-0	10-30	1mg/m^3 - Metal as Ni 1mg/m^3 - Insoluble compounds as Ni 1mg/m^3 - Soluble compounds as Ni	1.5mg/m^3 - Elemental metal as Ni 0.2 mg/m^3 - Insoluble as Ni 0.1 mg/m^3 - Soluble compounds as Ni
Zinc Galvanize (GI) Galvanneal (GA) ZnNi (EG)	7440-66-6	GI 99 min. GA 85 min.[3] ZnNi 70-90	5mg/m^3 - Fume 15mg/m^3 - Total dust 5mg/m^3 - Respirable fraction	5mg/m^3 - Fume 10mg/m^3 - Fume (STEL) 10mg/m^3 - Dust

Other Coatings (If applicable)		< 0.8 Total		
Barium Chromate	10-2944-03	10	0.5 mg/m^3 - As Ba 0.1 mg/m^3 - Ceiling as Cr VI	0.5 mg/m^3 - Soluble compounds as Ba 0.05 mg/m^3 - Cromium (VI) compounds as Cr
Chem Treat-Chrome	7440-47-3	0.3-12 MG/FT2	0.5 mg/m^3 - CrII and CrIII 1 mg/m^3 -Cr Metal and insoluble salts	0.5 mg/m^3 - Metal and CrIII 0.05 mg/m^3 - soluble Cr VI 0.01 mg/m^3 - insoluble Cr VI
Epoxy Resin	Varies	40-60	Not Established	Not Established
Phosphate Treat	7664-38-2	100-200MG/FT2	1 mg/m^3 (as phosphoric acid) PEL for Zinc Phosphate is Not Established	1 mg/m^3 (as phosphoric acid) TLV for Zinc Phosphate is Not Established
Silicates	Varies	3-30	Not Established	Not Established
Zinc Potassium Chromate	11103-86-9	1	0.5 mg/m^3 - CrII and CrIII 1 mg/m^3 -Cr Metal and insoluble salts	0.5 mg/m^3 - Metal and Cr III 0.05 mg/m^3 - soluble Cr VI 0.01 mg/m^3 - insoluble Cr VI

Surface Coating (If Applicable)				
Ingredient Name	**CAS Number**	**Percentage by wt.**	**OSHA PEL**	**ACGIH TLV**
Polyester, siliconized polyester, alkyd, fluorocarbon (PVDF) Epoxy, urethane, latex or acrylic paints and primers	Not Available	<1%		
Aluminum Powder	7429-90-5	5-20%	15 mg/m^3 TWA Respi Ceiling	10mg/m^3 TWA dust

[1] Refer to product specification for coating applicability.
[2] Percentages are expressed as typical ranges or maximum concentrations of trace elements in the coating, for the purpose of communicating the potential hazards of the finished product. Consult product specifications for specific composition information.
[3] In addition to trace elements the balance of the Galvanneal coating is alloyed Iron from the base metal.

Section 3. - Hazards Indentification

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 dust and fumes. Iron or steel foreign bodies imbedded in the cornea of the eye could produce rust stains if not removed quickly. Appropriate respiratory and eye protection as well as other personal protection equipment should be used.

Chemical Surface Treatments/Coatings: The possible presence of chemical surface treatments and oil coatings should be considered when evaluating potential 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, paint or acrylic films may produce emissions that can be irritating to the eyes and respiratory tract.

Potential Health Effects

Routes of Exposure: Inhalation, Ingestion, Skin Contact. Steel in its natural state does 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 irritations to the eyes, skin and mucous membranes of the upper respiratory tract. Excessive inhalation of fumes or dust from many metals can produce a reaction known as metal fume fever. Symptoms consist of chills and fever metallic taste in mouth, dryness and irritation of the throat followed by weakness and muscle pain. The symptoms come on in a few hours after excessive exposure and usually last 12 to 48 hours. Long term effects from metal fume fever have not been noted. Fumes from 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 fumes may irritate the gastrointestinal tract. Boron oxide, molybdenum, nickel phosphorus oxide and vanadium compounds, especially vanadium compounds especially vanadium pentoxide are respiratory tract irritants. Excessive inhalation of calcium oxide dusts may cause sever irritation and burns of the respiratory tract.

Ingestion: Ingestion of harmful amounts of this product as distributed is unlikely due to its insoluble form. Ingestion of dust may cause nausea or vomiting.

Eyes: Particles of iron or iron compounds could become imbedded in the eye. Torching or burning operations on steel products with surface treatments, oil coatings, or acrylic films may 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 dust 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 may cause skin irritation, dermatitis, ulceration or allergic reactions in sensitized individuals.

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 dust 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 dust/fines are a low health risk by inhalation and should be treated as a nuisance dust. Aluminum dust is a respiratory and eye irrantant.

Boron: Boron oxide dust and fumes may cause upper respiratory tract and eye irritation, dryness of mouth, nose or throat and sore throat and productive cough.

Calcium: Depending on the concentrations 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 dependant 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 hexavalant 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 classified as a human carcinogen.
Columbium: No reports of human intoxication. There is no evidence of a human 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 dust 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.
Phosphorus: Inhalation of phosphorus 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 silicone 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 10mg/m^3. 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 exposure to vanadium compounds especially the pentoxide, may result in chronic pulmonary changes such as emphysema or bronchitis.
Zinc: Welding and burning on zinc coated steel has been implicated in cases of metal fume fever. Latent liver dysfunction and gastrointestinal disturbances with pressure in the stomach region, nausea, and weakness have been reported from repeated inhalation zinc oxide. Repeated or prolonged skin contact to zinc oxide, coupled with poor personal hygiene may result in "oxide pox" due to clogging of sebaceous glands. "Oxide Pox", especially localized to moist areas is characterized by small red hard projecting papules with a central white plug, which develops into a pustule with intense itching. The lesions usually clear within 7-10 days. Repeated or prolonged eye contact with zinc oxide fume may produce conjunctivitis.

Long-term inhalation exposure to high concentrations (over exposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes, 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 of accidental carcinogens that are carcinogenic to humans.
Medical Conditions Aggravated by Long-Term Exposure: Individuals with chronic respiratory disorders (i.e., asthma, chronic bronchitis, emphysema, ect.) 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 needed. Seek medical attention promptly.
Ingestion: Not a probable route of industrial exposure. However, if ingested, seek medical attention immediately.
Eyes: Flush with large amounts of clean water to remove particles. Seek medical attention if irritation persists.
Skin: 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.

Section 5. - Fire-Fighting Measures

Flash Point: Not applicable
Flash Point Method: Not applicable
Flammable Limits
Burning Rate: Not applicable
Upper explosion limits: Not applicable
Lower explosion limits: Not applicable
Auto Ignition Temperature: Not applicable
Flamability Classification: Non-flammable, non-combustible
Suitable Extinguisher Media: Not applicable for solid product. Carbon dioxide blanket, water spray, dry powder, foam
Special Fire-Fighting Procedures: Full-face self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminates. Do not release runoff from fire control methods to sewers or waterways.
Hazardous Combustion Products: At temperatures above the melting point, fumes containing metal ozides and toher alloying elements may be liberated. If present, surface treatments such as corrosion-inhibiting oils, resin, or coatings on the product may yield noxious gases such as the oxides of carbon.
Unusual Fire/Explosion Hazards: High concentrations of airborne metallic fines may present an explosion hazard. Not applicable for solid product. Molten metal may react violently with water. Do not use water on molten metal.

Section 6. - Accidental Release Measures

Spill/Leak Procedures: Not applicable to metal in solid state. For spills involving finely divided particles, 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: Use lifting and work devices (e.g., crane, hoist, etc.) within rated capacities and in accordance with manufacturer's instructions when handling these products. Operations with the potential for generating high concentrations of airborne particles should be evaluated and controlled as needed.
Storage: Store away from acids and incompatible materials.

Section 8. - Exposure Controls/Personal Protection

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.
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 and its source.
Administrative Controls: Do not use compressed air to clean-up accumulated material or dust. Minimize generation of airborne emissions.
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.
Engineering Controls: Use controls as appropriate to minimize exposure to metal fumes and dust during handling operations.

Section 9. - Physical and Chemical Property

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
Specific Gravity (H20 =1, at 4°C): 7.85
pH: Not applicable

Water Solubility: Insoluble
Other solubility: 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: Base Metal - 2750°F

Section 10. - Stability and Reaction

Stability: Steel products are stable under normal storage and handling conditions.
Hazardous Polymerization: Will not occur
Conditions to Avoid: Avoid storage with strong acids or calcium hypochlorite. Molten metal may react violently with water.
Incompatible Materials: Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.
Hazardous Decomposition: Thermal oxidative decomposition of steel products can produce fumes containing oxides of iron, zinc, manganese as well as other elements. If present, surface treatments such as corrosion-inhibiting oils, resin, or coatings on the product may yield noxious gases such as the oxides of carbon upon thermal oxidative decomposition.

Section 11. - Toxicological Information

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: Not anticipated to pose significant skin hazards. Skin contact with the individual components may cuase physical abrasion, irritation, dermatitis, ulcerations and sensitizations.
Chronic Effects: See section 3.
Toxicity Data:[1]
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).
Carcinogenicity: Chromium and Nickel
Mutagenicity: No data available
Teratogenicity: No data available

Section 12. - Ecological Information

Ecotoxity: 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.

[1] See NIOSH, *RTEC* (NO7400000), for additional toxicity data on iron ixode, (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, (YW2460000) for vanadium pentoxide.

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. Waste steel proucts can be recycled for further use.
Disposal Regulatory Requirements: None
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): Metal Coated steel sheet are not listed as hazardous substances under 49 CFR 172.101.

Section 15. - Regulatory Information

Regulatory Information: The following listing of regulations relating to a Phillips Manufacturing Co. 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 Containment (29 CFR 1910.1000, Table Z-1, Z-1-A): Steel products as a whole is not listed. However, individual components of the product are listed.
U.S. 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, Nickel, Phosphorous and Zinc compounds 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, Phosphorous and Zinc(fume or dust) 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, Nickel and Zinc are Section 307 Priority Pollutants. Phosphorous is a Section 311 hazardous chemical.
Safe Drinking Water Act: Aluminum, Boron, Chromium, Copper, Iron, Manganese, Molybdenum, Nickel, Vanadium and Zinc 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, Vanadium and Zinc
- **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: This product may contain an extremely small amount of lead in the metallic coating, Per customer specification, an extremely small amount of hexavalent chromium passivation treatment may be applied to the surface of product. Lead, nickel and hexavalent chromium are materials known to the state of California to cause cancer or reproductive toxicity.
Other regulations: The product as 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