steelscape
A BlueScope Steel Company

Material Safety Data Sheet

Painted ZINCALUME® Steel

Article I. Section 1 - Chemical Product and Company Identification

Product name Painted ZINCALUME® Steel

Manufacturer Steelscape, Inc.
222 West Kalama River Road
Kalama, WA 98625

Revision Date 07/01/2008

Reference No. 200000000008

Emergency Contact: CHEMTREC (24 hours) 1-800-424-9300

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS-No.	Weight%	
		Min	Max
Base Steel			
Iron	7439-89-6	Balance	
Carbon	7440-44-0		0.30
Manganese Compounds (as Mn)	7439-96-5		1.00
Phosphorus	7723-14-0		0.15
Sulfur	7704-34-9		0.05
Silicon	7440-21-3		0.03
Aluminum	7429-90-5		0.10
Note: Base Steel may contain the following trace or residual elements: Chromium(0.10% max). Copper(0.12% max), Molybdenum (0.10% max), Nickel (0.12% max), Columbium (0.06% max), Tin (0.03% max), Titanium (0.06% max), and Vanadium (0.08% max).			
Metallic Coating			
Aluminum	7429-90-5	51.00	58.00
Zinc (Reportable as a fume or dust)	7440-66-6	40.00	48.00
Silicon	7440-21-3	1.30	1.90
Iron	7439-89-6		0.02
Surface Coating			
Polyester, siliconized polyester, alkyd, fluorocarbon(PVDJ),epoxy, urethane, latex or acrylic paints and primers			0.01
Polyvinyl Chloride	9002-86-2		0.01
Polyethylene film	9002-88-4		0.01
Strontium Chromate-7789-06-2	7789-06-2		0.10
The weight percentages of these compounds are below the levels for which reporting of exact percentages is required in Section 313 of SARA 40CFR Part 372.38			

Article II. Section 3 - Hazards Identification

Emergency Overview

Does not pose a health hazard in its normal form. Inhalation of metal dust and fume may result from further processing by the user, particularly during welding, burning, grinding and machining activities. These potential health hazards should be evaluated by the user. A non-metallic passivation treatment is normally applied based upon customer/end use criteria. These non-metallic coatings may contain hazardous substances of varying amounts. During processing, substances of varying chemical composition and quantity may be generated by the surface passivant. MSDS information regarding the surface passivant shall be supplied to the user upon request.

Carcinogenity:

Certain chromium and nickel compounds as well as organic compounds found in various coating materials have been listed as carcinogens by the NTP, IARC, or OSHA.

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.

Chronic Effects:

Chronic inhalation concentrations of iron oxide fumes or dusts may lead to a benign pneumoconiosis (siderosis). Inhalation of high concentrations of ferric oxide may possibly enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Chronic inhalation concentrations of aluminum fumes or dusts may lead to a fibrotic lung condition known as Shaver.s disease; however, evidence for this is not conclusive since affected workers were exposed to other substances (silica) as well. The inhalation of high concentrations of dust from manganese, copper, lead and/or zinc in the respirable particle size range can cause an influenza-like illness termed metal fume fever. Typical symptoms last 12 to 48 hours and are characterized by metallic taste in mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills. Continuous exposures to high concentrations of manganese can cause central nervous system disorders and .manganese pneumonia.. Fibrosis of lung tissue from manganese exposure has also been reported for products containing manganese only. Overexposure to aluminum dust can cause shortness of breath. Long term inhalation exposure to high concentrations (overexposure) to pneumoconiotic agents may act synergistically with inhalation of oxides, fumes or dusts of this product to cause toxic effects. Prolonged or repeated contact with unprotected skin may result in skin irritation. Torching or burning operations on steel products with oil or organic coating may produce emissions which can be irritating to the eyes and respiratory tract.

Article III. Section 4 - First Aid Measures

Eye contact:

Treat any foreign body in eye by flushing with large amounts of water. Seek medical attention immediately.

Skin contact:

Skin hazards are not expected. However, should dermatitis develop, affected area should be washed with mild soap and water. If irritation or other symptoms develop, seek medical attention. Precautions should be taken to protect against sharp steel edges. If the skin is abraded by handling, seek medical attention.

Ingestion:

Ingestion hazards are not expected.

Inhalation:

For treatment of overexposure to fumes and/or particulates, remove exposed individual to fresh air and seek medical attention. Administer artificial respiration or oxygen if breathing is difficult or has stopped.

Article IV. Section 5 - Fire-Fighting Measures

Not flammable or combustible. Steel products in the solid state present no fire or explosion hazard and do not contribute to the combustion of other materials.

Article V. Section 6 - Accidental Release Measures

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.

Article VI. Section 7 - Handling and Storage

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.

Article VII. Section 8 - Exposure Controls / Personal Protection

Respiratory protection:

NIOSH/MSHA approved dust and fume respirators should be used to avoid excessive inhalation of particulates. Appropriate respirator selection depends on the magnitude of exposure.

Hand protection:

Protective gloves should be worn as required for welding, burning or handling operations. If material is supplied with oil or other organic coating, wear protective gloves. However, do not continue to use gloves or work clothing that have become saturated with oil. Wash hands and any additional contact areas with soap and water or waterless hand cleaner.

Eye protection:

Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.

Engineering measures:

Local exhaust ventilation should be provided when welding, burning, sawing, brazing, grinding or machining to prevent excessive dust or fume exposure.

Personal protection equipment:

Operations with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Avoid breathing metal fumes and/or dust.

Article VIII. Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: Thin sheet steel color, varies w/ topcoat used
Odor: None
Vapor Pressure (mm Hg): N/A
Vapor Density (air = 1): N/A
Formula Weight: N/A
Density: N/A
Sp. Gravity(H2O = 1): 7.8000N/A
pH: N/A

Water Solubility: Insoluble
Other Solubilities: N/A
Boiling point/range: N/A
Freezing/Melting Point: N/A
Viscosity: N/A
Refractive Index: N/A
Surface Tension: N/A
% Volatile: N/A
Evaporation Rate: N/A

Article IX. Section 10 - Stability and Reactivity

Chemical Stabilibity:

Stable under normal conditions of use, storage and transport.

Hazardous Conditions to Avoid:

Will react with strong acid to liberate hydrogen. Finely divided material may react with water, strong oxidizers, alkaline, and hydrogenated compounds. At temperatures exceeding the melting point of the metallic coating, fumes may be liberated which contain oxides of the metallic coating

constituents. At temperatures exceeding the melting point of the base metal, fumes may be liberated which contain oxides of iron and other steel alloying elements.

Article X. Section 11 - Toxicological Information

Ingredient Name	LD50 or LC50 Species /Route	OSHA PEL	ACGIH TLV(mg/m3) (TWA unless specified)
Base Steel			
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Carbon	No Information	Not Established	Not Established
Manganese Compounds (as Mn)	rat/oral 9 mg/kg	5 ceiling as Mn	5 Dust as Mn 1 Fume as Mn 3 Fume as Mn (STEL)
Phosphorus	No Information	.1 Total	Not Established
Sulfur	No Information	15 Total Dust	13 as SO2
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Metallic Coating			
Aluminum	No Information	10 Total Dust 5 Respirable Fraction	10 Metal Dust as Al
Zinc (Reportable as a fume or dust)	No Information	5 Fume as ZnO	5 Fume as ZnO
Silicon	No Information	15 Total Dust 5 Respirable Fraction	10 Total
Iron	mouse/oral 5.4 mg/kg	10 Iron Oxide Fume	5 Iron Oxide Fume as Fe
Surface Coating			
Polyester, siliconized polyester, alkyd, fluorocarbon(PVDJ),epoxy, urethane, latex or acrylic paints and primers	No Information	Not Established	Not Established
Polyvinyl Chloride	No Information		
Polyethylene film	No Information	Not Established	Not Established
Strontium Chromate-7789-06-2	No Information	Not Established	Not Established

Article XI. Section 12 - Ecological Information

No data available for product as a whole. However, individual components have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife. Lead can be bioaccumulated in plants and water organisms, especially shellfish.

Article XII. Section 13 - Disposal Consideration

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.

Article XIII. Section 14 - Transport Information

Not listed as a hazardous substance under 49 CFR 172.101.

Article XIV. Section 15 - Regulatory Information

SARA 311/312 Codes (40CFR370): Immediate (acute) health hazard and delayed (chronic) health hazard. SARA 313 (40CFR372.65): Manganese and Lead 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.

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. OSHA Specifically Regulated Substance: Lead (29 CFR 1910.1025).

Article XV. Section 16 - Other Information

Proposition 65 Statement:

WARNING: This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This Material Safety Data Sheet (MSDS) has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Supplier Notification Requirements of SARA Title III, Section 313. This MSDS represents products which may contain toxic chemicals.

The information contained in this MSDS was obtained from sources which are believed to be reliable by the manufacturer. However, the information is provided without any responsibility or warranty, expressed or implied regarding it's accuracy or correctness. The conditions or methods of handling, storage, use and disposal of this product are beyond the knowledge of the manufacturer. For this and other reasons, the manufacturer does not assume responsibility and expressly disclaims liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.