# Hohmann & Barnard, Inc. Material Safety Data Sheet \*\*\* Galvanized Steel Sheet Items \*\*\*

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# I. IDENTIFICATION

PRODUCT NAME: Galvanized Sheet - Electrolytic

COMMON NAME(S): Same CAS NO.: 65997-19-5

# II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

NOTE: Steel products under normal conditions do not present an inhalation, ingestion or contact health hazard (See Section VI).

BASE METAL, ALLOYING	%	EXPOSURE LIMITS	EXPOSURE LIMITS	
ELEMENTS AND METALLIC	WEIGHT	OSHA PEL	ACGIH TLV	
COATINGS				
Base Metal: Iron (1309-37-1 as iron oxide fume)	Balance	10 mg/M <sup>3</sup> for iron oxide fume	5 mg/M <sup>3</sup> for iron oxide fume	
,				
Alloying Elements:				
Carbon (7440-44-0)	.005/.60	None established	None established	
Manganese (7439-96-5)	.05/1.50	$(c) 5 \text{ mg/M}^3$	(c) 5 mg/M <sup>3</sup> - dust 1 mg/M <sup>3</sup> - fume	
Phosphorus (7723-14-0)	.15 max	None for inorganic phosphates	None for inorganic phosphates	
Sulfur (7704-34-9)	.05 max	$13 \text{ mg/M}^3 \text{ as SO}_2$	5 mg/M <sup>3</sup> as SO <sub>2</sub>	
Aluminum (7429-90-5)	.10 max	None established	$10 \text{ mg/M}^3$	
Metallic Coating:				
Zinc (1314-13-2)	10 max	$5 \text{ mg/M}^3$	10 mg/M <sup>3</sup> - Total ZnO dust	
			5 mg/M <sup>3</sup> - Resp. ZnO dust & fume	

(c) denotes "ceiling limit" which is not to be exceeded at any time Oil coating may be used; see Annex II.

NOTE: All commercial metals 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. Typical levels of commonly involved trace or residual elements that may be encountered in steel products are provided in Annex I so that their potential hazards may be considered.

## III. PHYSICAL DATA

MELTING POINT BASE METAL:  $2750^{\circ}$  F METALLIC COATING:  $800^{\circ}$  F APPEARANCE AND ODOR: Metallic Gray, No Odor

# IV. FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD.

## V. REACTIVITY DATA

Stable under normal conditions of use, storage and transport. Will react with strong acid to liberate hydrogen. At temperatures above the melting point of the coating, may liberate zinc fumes.

#### VI. HEALTH HAZARD DATA

NOTE: Steel products under normal conditions do not present an inhalation, ingestion or contact health hazard. However, operations, such as, burning, welding, sawing, brazing, grinding, and possibly machining, etc., which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates, may present health hazards.

EFFECTS OF OVEREXPOSURE:			MAJOR EXPOSURE HAZARD				
( X ) INHALATION	(	) SKIN CONTACT	(	) EYE CONTACT	(	) INGESTION	
Chronic inhalation of high concentrations of iron oxide fumes or dusts may lead to a benign							

chronic inhalation of high concentrations of iron oxide tumes 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.

The inhalation of high concentrations of freshly formed oxide fumes and dusts of 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 the mouth, dryness and irritation of the throat, followed by weakness, muscle pain, fever and chills.

EMERGENCY AND FIRST AID PROCEDURES: For overexposure to airborne fumes and particulates, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly. Treat metal fume fever by bed rest, and administer a pain and fever reducing medication.

## VII. SPILL OR LEAK PROCEDURES

NOT APPLICABLE TO STEEL IN THE SOLID STATE.

## VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY: 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. SKIN: Protective gloves should be worn as required for welding, burning or handling operations.

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

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

OTHER PROTECTIVE EQUIPMENT: Depending upon the conditions of use and specific work situation, additional protective equipment and/or clothing may be required to control exposures.

# IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

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

# **OTHER COMMENTS:**

Medical conditions aggravated by 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.

This information is taken from sources or based upon data believed to be reliable; however, Hohmann & Barnard, 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.