Material Safety/Health Data Sheet

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SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME
HOT DIPPED GALVANIZED LOW CARBON STEEL
(Coating/Thickness in inches)
G30-A40/.051-.013 G60-G75/.099-.025 G90/.129-.031
G115/.168-.040 G140-G165/.168-.056 G210-G235/.168-.076

GRADE(S)
CQ, DQ, DDQ, DQSK, LFQ, SQ, EDDQ; ASTM A525; A526; A527; A528; A642; Including Galvanneal Products

SECTION II - INGREDIENTS

Ingredients	CAS#	%wt.	Exposure Limits	OSHA PEL mg/M3	ACGIH TLV mg/M3	ACGIH STEL mg/M3
Iron	1309-37-1	94-99	PEL as Iron Oxide Fume	10	5	
Carbon	7440-44-0	.001-.15	PEL as P.N.O.R. (*)(+)	15	10	
Manganese	7439-96-5	.01-.99	PEL as Manganese Dust	5 (c)	5	
			as Manganese Fume	5 (c)	1	3
Phosphorous	8049-19-2	.001-.020	PEL as P.N.O.R. (*)(+)	15	10	
Sulfur	7704-34-9	.001-.020	PEL as P.N.O.R. (*)(+)	15	10	
Silicon	7440-21-3	.01-.30	PEL as P.N.O.R. (*)(+)	15	10	
Aluminum	7429-90-5	.01-.08	PEL as Metal Dust (+)	15	10	
@ Zinc (1)	7440-66-6	1.00-4.50	PEL as Zinc Oxide Dust	15	10	
			as Zinc Oxide Fume	5	5	10
Titanium (2)	7440-32-6	.01-.15	PEL as P.N.O.R. (*)(+)	15	10	
Columbium (2)	7440-03-1	.01-.15	PEL as P.N.O.R. (*)(+)	15	10	

Phosphate treated, with light chromate rinse. (3)
Rinse with light chromate. (3)

1. *Applied as a metallic surface coating.*
2. *If specified Columbium - Titanium stabilized.*
3. *If specified.*

(*) *P.N.O.R. - Particulates Not Otherwise Regulated*
(+) *PEL as Respirable Fraction - 5 mg/M3*
(c) *Denotes Ceiling Limit*

The above chemistries are provided for industrial hygiene and environmental purposes and are not intended to represent product specifications. This information has been compiled from data believed to be reliable. Elements such as aluminum, arsenic, boron, calcium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, tin, titanium, vanadium and zirconium may be present in trace amounts. Steel products may be coated with petroleum oils to meet customer specifications. Information relative to specific coatings may be obtained from LTV Steel. Steel products as shipped do not present an exposure hazard.

SECTION III - PHYSICAL DATA

BOILING PT.: NA
MELTING PT.: 2400 to 2800 F
SPECIFIC GRAVITY: 7.5 to 8.5
VAPOR PRESSURE: NA
VAPOR DENSITY: NA
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR:
SOLID GRAY ODORLESS METAL

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD; HOWEVER, THE PARTICULATES GENERATED MAY PRESENT A DUST EXPLOSION HAZARD.

SECTION V - REACTIVITY

STABILITY: STABLE
INCOMPATIBLE MATERIALS: NONE
HAZARDOUS DECOMPOSITIONS: NONE
POLYMERIZATION: WILL NOT OCCUR

SECTION VI - SPILL OR LEAK PROCEDURES

PRODUCT IS A SOLID MATERIAL AS SHIPPED. NO POTENTIAL FOR SPILL OR LEAK

SECTION VII - SPECIAL PROTECTION INFORMATION

VENTILATION:
IF YOUR OPERATION GENERATES PARTICULATES WHEN PROCESSING THIS PRODUCT, LOCAL AND GENERAL VENTILATION MAY BE NECESSARY TO CONTROL EMPLOYEE EXPOSURES TO WITHIN APPLICABLE LIMITS.

RESPIRATORY PROTECTION:
IF THE EXPOSURE LIMITS INDICATED ARE EXCEEDED, NIOSH APPROVED RESPIRATORS FOR PROTECTION AGAINST DUST AND/OR FUME SHOULD BE WORN IN ACCORDANCE WITH 29 CFR 1910.134.

PROTECTIVE EQUIPMENT:
APPROPRIATE PROTECTIVE EQUIPMENT SHOULD BE WORN WHEN BURNING OR WELDING THIS PRODUCT. GLOVES SHOULD BE CONSIDERED WHEN HANDLING MATERIAL TO PREVENT CUTS AND SKIN IRRITATION. APPROVED EYE PROTECTION IS RECOMMENDED FOR OPERATIONS INVOLVING BURNING, GRINDING, BRAZING, WELDING, OR MACHINING.

SECTION VIII - HEALTH HAZARD DATA

MSDS # 40046

Steel products in the natural state do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing, and grinding may result in the following effects if exposures exceed permissible limits as listed in Section II.

MAJOR EXPOSURE ROUTES: ☒ INHALATION ☐ SKIN CONTACT ☐ SKIN ABSORPTION ☐ EYE CONTACT ☐ INGESTION

Iron Oxide

Prolonged or repeated exposures to high concentrations may cause lung changes considered to be a benign pneumoconiosis (siderosis). Inhalation of iron oxide may cause irritation of eyes, nose, and throat, and metal fume fever.

Manganese

Exposure may cause irritation of eyes, nose, and throat, metallic taste in mouth and metal fume fever. Advanced exposure symptoms may include weakness, sleepiness, nervousness, lack of coordination, uncontrollable laughter, mental confusion, speech disturbances, and aggressiveness. Manganese may cause bronchitis, pneumonitis and central nervous system disturbances.

Aluminum

Generally considered to be a nuisance particulate. May cause irritation of the upper respiratory tract, skin, and eyes. Inhalation of fine particles may cause a pulmonary fibrosis known as Shaver's disease. Symptoms may include dyspnea, cough and fatigue. May be implicated in Alzheimer's disease.

Zinc

Syndrome of metal fume fever. Symptoms may include metallic taste in mouth, dryness and irritation of throat, cough, feeling of weakness, fatigue with fever, chills and profuse sweating. Symptoms generally occur 12-14 hours after exposure. May cause a dermatitis condition known as oxide pox.

Coating Oils

Steel coated with an oil may result in a mild skin irritation upon prolonged and repeated contact. Wear gloves and/or wash skin following contact to prevent skin irritation.

California Proposition 65:
Warning: Steel products contain arsenic, cadmium, lead and nickel in trace amounts, unlesss otherwise specified in Section II, known to the State of California to cause cancer or birth defects or other reproductive harm.

CARCINOGENIC REFERENCES:

Certain substances in steel products such as arsenic, chromium, nickel, and cobalt-chromium alloys have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents.

SECTION IX - MEDICAL

FIRST AID:

Inhalation:	Move person to fresh air. Administer oxygen if necessary. Seek physician's assistance.
Skin:	Wash with soap and water. Consult physician if necessary.
Eye:	Flush with copious amounts of water. Consult a physician if necessary.

NOTES TO PHYSICAN:

Respiratory disorders may be aggravated by exposure to metallic dusts or fumes. If steel contains lead consult OSHA Lead Standard 1910.1025.

SECTION X - SPECIAL PRECAUTIONS

NONE

SECTION XI - S.A.R.A.

The chemicals identified by (@) in Section II denotes this product contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.