



MATERIAL SAFETY DATA SHEET

STEEL PRODUCTS

ORIGINAL ISSUE DATE: 5/8/03

REVISED: 5/20/03

I . IDENTIFICATION	WIRE PRODUCTS
PRODUCT NAME: STEEL PRODUCTS: WIRE & WIRE PRODUCTS COMMON NAME(S): SAME	STEEL SCREWS

II . INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

Note: steel products under normal conditions do not present an inhalation

BASEMETAL & METALLIC COATINGS			% WT.	EXPOSURE LIMITS	
CHEMICAL	SYMBOL			OSHAPEL	ACGIHTLV
All Products: Iron	Fe		95.0	10.0 mg/M ³ fume	5.0 mg/M ³ fume
Galvanized Products: Zinc	Zn				

SEE ANNEX 1 FOR BALANCE OF INGREDIENTS. SEE ANNEX 3 FOR ANIL COATINGS.

SECTION 313 – SUPPLIER NOTIFICATION

This product contains threshold concentrations of the following toxic chemicals subjects to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986(40CFR372):

Chromium, Manganese, Nickel and Zinc(Galvanized Coating Only) in the amounts noted above and on ANNEX 1.

This information should be included in all MSDS's that are copied and distributed for this material.

III . PHYSICAL DATE

SPECIFIC GRAVITY(H=0>1):	7.85	SOLUBILITY IN WATER:	NONE
BOILING POINT(iron):	4950°F	EVAPORATION RATE (Butyl Acetate=1):	N/A
MELTING POINT(Base Metal):	2400°F	VOPOR PRESSURE(mm Hg):	N/A
MELTING POINT(Metallic Coating):	800°F	VOPOR DENSITY(Air 1):	N/A
APPEARANCE:	Metallic Grey	ODOR:	NONE

VI . 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, may liberate fumes containing oxides of iron & alloying elements.



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TYPICAL LEVELS OF TRACE OR RESIDUAL ELEMENTS IN STEELS

All steel products are alloys which consist primarily of iron(generally 95 %). However, other elements which are either added intentionally or present as contaminants or residuals may also occur in these products at trace of low level concentration(generally <1.0%). These elements may include the following:

ALLOYING & RESIDUAL ELEMENTS		% WT.	EXPOSURE		LIMITS	
			OSHAPEL	ACGIHTLV		
Aluminum	Al	0.01-0.06	total 15.0 mg/M ³ respirable 5.0 mg/M ³	fume 0.05mg/M ³		
Antimony	Sb	<0.005	0.5 mg/M ³	0.5 mg/M ³		
(1) Arsenic	As	0.002-0.009	0.01 mg/M ³	0.2 mg/M ³		
Boron	B	0.0002-0.004	total 10.0 mg/M ³ respirable 5.0 mg/M ³	10.0 mg/M ³ 2.0 mg/M ³		
Calcium	Ca	0.0001-0.002	5.0 mg/M ³			
Carbon	C	0.05-0.84	NONE	NONE		
(1) Chromium	Cr	0.01-0.10	1.0 mg/M ³	0.5 mg/M ³		
Cobalt	Co	<0.011	0.05 mg/M ³	0.05mg/M ³		
Copper	Cu	<0.25	fume 0.1 mg/M ³	fume 0.2mg/M ³		
Lead	Pb	<0.002	0.05 mg/M ³	0.15mg/M ³		
Manganese	Mn	0.4-1.2	fume 1.0 mg/M ³	fume 1.0mg/M ³		
Molybdenum	Mo	0.01-0.06	total 10.0 mg/M ³ respirable 5.0 mg/M ³	10.0mg/M ³		
(1) Nickel	Ni	0.01-0.10	1.0 mg/M ³	1.0mg/M ³		
Phosphorous	P	<0.04	0.1 mg/M ³	0.1mg/M ³		
Silicon	Si	<0.30	total 10.0 mg/M ³ respirable 5.0 mg/M ³	10.0mg/M ³		
Sulfur	S	<0.05	SO2 5.0 mg/M ³	SO2 5.0mg/M ³		
Tin	Sn	<0.03	2.0 mg/M ³	2.0mg/M ³		
Titanium	Ti	0.02-0.04	total 10.0 mg/M ³ respirable 5.0 mg/M ³	10.0 mg/M ³		
Vanadium	V	0.001-0.03	fume 0.05 mg/M ³	fume 0.05 mg/M ³		

(1) Recognized to have human carcinogenic or co-carcinogenic potential; included on IARC & NTP listings.