

PREPARED BY DISTRIBUTOR:



Castle Metals®

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Franklin Park, IL 60131

MATERIAL SAFETY DATA SHEET

(This product contains one or more toxic chemicals subject to the reporting requirements of section 313 of the EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT of 1986 and of 40CFR72).

ISSUE DATE

November 25, 1985

REVISED

May 1, 2010

For Information or In An Emergency
Call: (847) 455-7111

Section 1 - Product Identification

Manufacturer's Name

Various

Product Name / Trade Name

Stainless Steel

Common Name - Grade

3XX Series, 4XX Series

Section 2 - Hazardous Ingredients

NOTE: Products Under Normal Conditions Do Not Represent An Inhalation, Ingestion or Contact Health Hazard.

Base Metal, Alloying Elements And Metallic Coatings	CAS#	WT % (1)	OSHA PEL (mg/g ³) (3)	ACGIH TLV TWA (Unless Noted Otherwise) (mg/m ³) (2)
Base Metal				
Iron (Fe)	7439-89-6	60-88	10	5 (As Iron Oxide)
Alloying Elements				
Chromium (Cr)	7440-47-3	10-30	0.5	.5
Nickel (Ni)	7440-02-0	0-27	1	0.5
Manganese (Mn)	7439-96-5	<6	5	0.2
Molybdenum (Mo)	7439-98-7	<6	15	10 (Insoluble Compound)
Copper (Cu)	7440-50-8	<6	1	1 (Dust & Mist)
Titanium (Ti)	7440-32-6	<6	15	10 (As Titanium Dioxide)
Carbon (C)	7440-44-0	<2	N.E.	3.5 (As Carbon Black)
Phosphorus (P)	7723-14-0	<2	.1	.1 (Yellow)
Sulfur (S)	7704-34-9	<2	13	5 (As SO ₂)
Silicon (Si)	7740-21-3	<2	15	10 (Total Dust)
Cobalt (Co)	7440-48-2	<2	0.1	0.02 (Dust & Fume)
Niobium (Nb)	7440-03-1	<2	N.E.	N.E.
Tin (Sn)	7440-31-5	<2	2	2

(1) % Of Alloying Material Varies With Grade Of Material.

(2) 1996 ACGIH Threshold Limit Value.

(3) 1993 OSHA Permissible Exposure Limit.

Section 3 - Physical Data

Material Is (At Normal Conditions)

Solid

Appearance and Odor

Gray-Black, Odorless

Melting Point (Base Metal)

>2500° F

Specific Gravity

Approximately 7

Section 4 - Fire And Explosion

Extinguishing Media

NA

Special Firefighting Procedures

Steel products in the solid state present no fire or explosion hazard.

Unusual Fire and Explosion Hazards

NA

Section 5 - Reactivity Data

Stability

Stable

Incompatibility (Materials to Avoid)

Reacts with strong acids to produce hydrogen gas.

Conditions to Avoid

NA

Hazardous Decomposition Products

Metallic dust or fumes may be produced during welding, burning, grinding and possibly machining.
Refer to ANSI Z49.1

Product
Stainless

Section 6 - Health Hazard Data

NOTE: 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 RELEASE FUMES AND/OR DUSTS WHICH MAY PRESENT HEALTH HAZARDS IF TLV'S ARE EXCEEDED

MAJOR EXPOSURE HAZARD

Inhalation Skin Contact Skin Absorption Eye Contact Ingestion

Effects of Overexposure

Short term exposure to fumes/dust may produce irritation of eyes and respiratory system. Inhalation of high concentrations of freshly formed oxide fumes of iron, manganese and copper may cause metal fume fever characterized by a metallic taste in the mouth, dryness and irritation of the throat and influenzalike symptoms.

Chronic inhalation of high concentrations of iron oxide fumes or dust 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.

Chromium and nickel and their compounds are listed in the 3rd Annual Report on Carcinogens, as prepared by the National Toxicology Program (NTP). Exposure to high concentrations of dust and fumes can cause sensitization dermatitis, inflammation and/or ulceration of upper respiratory tract and possibly cancer of nasal passages and lungs.

Recent epidemiological studies of workers melting and working alloys containing nickel/chromium have found no increased risk of cancer.

Suspected Cancer Agent? _____ NO: This product's ingredients are not found in the lists below.
 YES: _____ Federal OSHA NTP _____ IARC

Emergency and First Aid Procedures

If exposed to excessive levels of metal fumes, remove to fresh air, seek medical aid immediately.
Eyes - Flush with water for at least 15 minutes.

Section 7 - Spill or Leak Procedures

Spill or Leak Procedures

NA

Waste Disposal Methods

According to local, state and federal regulations

Section 8 - Special Protection

Respiratory

NIOSH/MSHA - Approved dust and fume, respirator should be used to avoid excessive inhalation of particulates when exposure exceeds TLV's.

Ventilation

Local exhaust ventilation should be utilized when welding, burning, sawing, brazing, grinding or machining when exposure exceeds TLV's.

Eye Protection and Protective Clothing

Safety glasses or goggles should be utilized as required by exposure. Other protective equipment should be utilized as required by the welding standards.

Section 9 - Special Precautions

In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod.
Arc or spark generated when welding or burning could be a source of ignition for combustible and flammable materials.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

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Data sheets of individual manufacturers may be obtained by contacting A. M. Castle & Co., 3400 N. Wolf Road, Franklin Park, IL 60131 Attn: Corp. Safety Mgr.