



Techalloy All Grades Stainless

OLSON & JEFFERSON STREETS, UNION, IL 60180-4023 Phone: 815-923-2131
800-435-8317, FAX: 815-923-2126

WIRE DIVISION

MATERIAL SAFETY DATA SHEET

SECTION I - PRODUCT IDENTIFICATION

This MSDS applies to all grades of Stainless Steels processed by Techalloy Company, Inc., Wire Division.

SECTION II - HAZARDOUS INGREDIENTS

No permissible exposure limits (PEL) or threshold limit values (TLV) exist for Stainless Steels. Values shown below are applicable to major component elements. These elements may appear in some or various combinations in any particular grade.

COMPONENT	%	CAS NUMBER		OSHA PEL (MG/M ³)	ACGIH TLV (MG/M ³)
Aluminum (Al)	<2.0	7429-90-5	Dust Fumes	-	10.00 5.00
Carbon (C)	<2.0	1333-86-4	As Carbon Black	3.50	3.50
Chromium (Cr)	>.10 <35.0	7440-47-3		1.00	0.50
Cobalt (Co)	<4.5	7440-48-4		0.10	(0.10)**
Copper (Cu)	<4.5	7440-50-8	Dust Fumes	1.00 0.10	1.00 0.20
Iron (Fe)	>40.00 <99.0	1309-37-1	PEL-Iron Oxide Fumes TLV - as Fe	10.00	5.00
Manganese (Mn)	<10.0	7439-96-5	Dust Fumes	5.00* -	5.00* 1.00
Molybdenum (Mo)	<10.0	7439-98-7	Insol. Compd.	15.00	10.00
Nickel (Ni)	<35.0	7440-02-0		1.00	1.00
Silicon (Si)	<2.50	7440-21-3	Respirable Dust	-	5.00
Sulfur (S)	<0.40	7446-09-5	As Sulf. Dioxide	-	5.00
Phosphorus (P)	<0.05	7723-14-0		-	0.10
Titanium (Ti)	<2.50	13463-67-7	As Ti Dioxide	15.00	5.00
Tungsten (W)	<6.50	7440-33-7	Insol. Compd.	-	5.00
Vanadium (V)	<4.50	1314-62-1	Dust Fumes (As Vanadium Pentoxide)	0.50* 0.10*	0. 0.05
Niobium/ Tantalum (Nb/Ta)	<1.00	7440-25-7 7440-03-1		5.00 (Ta)	5.00 (Ta)

* Ceiling Limit

** Parenthesis means ACGIH has published a limit of 0.05 Mg/M³ in their notice of intended changes.

SECTION III - PHYSICAL DATA

Melting Point: 2500 Degrees F - 2800 Degrees F
Density: .28 lb/cu. in.
Flash Point: None
Boiling Point: High
Solubility in Water: Insoluble
Vapor Pressure: N/A
Vapor Density: N/A
Evaporation: N/A
% Volatiles by Volume: N/A
Appearance and Odor: Solid, Odorless Metal

SECTION IV - FIRE AND EXPLOSION DATA

Stainless Steel Products in the form shipped are not considered combustible. During subsequent processing (cutting, welding, grinding, etc.), the generation of dust in high concentration may present fire and explosion hazards.

SECTION V - REACTIVITY DATA

Solubility: Insoluble in water and alkalies
Corrodes in acids and certain salts
Hazardous Decomposition Products: Metal Fumes

SECTION VI - HEALTH HAZARD INFORMATION

Adequate ventilation is required when welding, cutting, grinding, or burning this product. Dust/fume respirators are required if the fume levels exceed TLV values.

SECTION VII - EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Seek medical attention, if necessary.
Skin: If irritation develops, remove contaminated clothing immediately and wash the contaminated skin with soap and water. Seek medical attention if irritation persists.
Eyes: If eyes become irritated from dust or fumes, wash with large quantities of water. Seek medical attention when necessary.
Ingestion: Seek medical attention, when necessary.

SECTION VIII - SPILL OR LEAK PROCEDURES

Spills: Not applicable
Waste Disposal: Solids - Recycle as scrap
Dusts - Dispose of dusts according to local, state, and federal regulations.

SECTION IX - SPECIAL PROTECTION INFORMATION

No toxic effects are expected from the alloy in the inert solid form. Excessive inhalation of fumes or dusts from burning, welding, grinding, and cutting can produce an acute reaction known as metal fume fever. Nickel and chromium must be considered possible carcinogens under OSHA (29CFR1910.1200); however, recent studies of workers melting or working alloys containing these elements have been found to have no increased risk of cancer.

SECTION X - ADDITIONAL INFORMATION AND PRECAUTIONS

Maintain exposure levels below PEL/TLV using the proper ventilation and safety equipment.
Coated material must be evaluated with the proper safety practice for the coating involved.
Information herein was obtained from sources which are believed to be authoritative and valid. However no warranty, expressed or implied, can be made.