

## Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

## U.S. Department of Labor

Occupational Safety and Health  
Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY ( <i>As Used on Label and List</i> )  Stainless Steel Knitted Wire Mesh	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
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### Section I

Manufacturer's Name  IMG	Emergency Telephone Number  714-771-2401
Address ( <i>Number, Street, City, State, and ZIP Code</i> )  1740 W. Katella Ave. Suite A	Telephone Number for information  714-771-2401
Orange, CA 92867	Date prepared  Nov 1, 2012
	Signature of Preparer ( <i>optional</i> )

### Section II - Hazardous Ingredients

Ingredients	CAS no.	TLV*	PEL*	Ingredients	CAS no.	TLV	PEL
Aluminum (Al)	7429-90-5	10	15	Molybdenum (Mo)	7439-98-7	10	15
Chromium (Cr)	1440-47-3	0.5	1	Nickel (Ni)	7440-02-0	1	1
Copper (Cu)	7440-50-8	1	1	Niobium (Nb)	7440-03-1	None	None
Iron (Fe)	1309-37-1	None	None	Silicon (Si)	7440-21-3	10	15
Manganese (Mn)	7439-96-5	.02	5	Titanium (Ti)	7440-32-6	None	None

TLV & PEL in mg/m<sup>2</sup>

C=ceiling limit

### Alloy and Composition

Alloy*	Mn	Si	Cr	Ni	Mo	Fe	Other
S177	0.0-1.0		16.0-18.0	6.5-7.8	2.0-3.0	REM	A 1 0.75-1.5

S216	7.5-9.0		17.5-22.0	5.0-7.0		"	
S2209	0.5-2.0		21.5-23.5	7.0-9.0	2.5-3.5	"	
S302, S302H	0.0-2.0		17.0-19.0	8.0-10.0		"	
S302HQ	0.0-2.0		17.0-19.0	8.0-10.0		"	Cu 3.0-4.0
S304, 304L, 304H	0.0-2.0		18.0-20.0	8.0-10.5		"	
S305, S305HQ	0.0-2.0		17.0-19.0	10.5-13.0		"	
S308, S308L, S308LSI	0.0-2.5		19.0-22.0	9.0-12.0		"	
S309, S309L, S309LSI	0.0-2.5		22.0-25.0	12.0-15.0		"	
S310, S310S	0.0-2.5		24.0-28.0	19.0-22.5		"	
S312	0.0-2.5		28.0-32.0	8.0-10.5		"	
S31254	0.0-2.0		19.5-20.5	17.5-18.5		"	
S314	0.0-2.0	0.0-2.5	23.0-26.0	19.0-22.0		"	
S316, S316L,S316LSI	0.0-2.5		16.0-20.0	10.0-14.0	2.0-3.0	"	
S317, S317L	0.0-2.5		18.0-20.5	11.0-15.0	3.0-4.0	"	
S321	0.0-2.0		17.0-19.0	9.0-12.0		"	Ti 0.1-1.0
S347	0.0-2.5		17.0-21.5	9.0-12.0		"	Nb+Ta 0.1-1.0
S35/19Cb	0.0-2.5	0.75-2.0	19.0-21.0	34.0-37.0		"	Nb+Ta 0.75-1.5
S409 /S409CB			10.5-12.5	0.0-0.6		"	Ti 0.1-1.0
S410, S410L			11.5-13.5	0.0-0.6		"	
S420			12.0-14.0	0.0-0.6		"	
S430			16.0-18.0	0.0-0.3		"	
S434A			16.0-18.0	0.0-0.5		"	Cu 0.75-1.25
S446	0.0-1.5		23.0-27.0	0.0-0.5		"	

\*Welding grade limits included in each alloy.

\*TLV = Threshold Limit Value, American Conference of Governmental Industrial Hygienists

\*PEL = Permissible Exposure Limit, OSHA (29CFR 1910.1000)

### Section III – Physical Data

Solid silver colored metal wire. S.G. = 7.8-8.0 g/cm <sup>3</sup> , M.P. = 1370-1540°C.
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### Section IV - Fire and Explosion Data

Non-flammable, non-explosive, CAUTION: Welding arcs and sparks can ignite flammable gases and combustible liquids or solids.
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## Section V - Reactivity Data

High temperature cutting and welding produce hazardous fumes and gases. The constituents of the fume may include oxides and silicates of elements in the base metal, filler metal, and any coatings present. Gases are generated during welding by heat or reaction between ultraviolet radiation and air. The gases are dependent on the alloy being welded, the process, and electrodes used. The following decomposition products and exposure limits apply to brazing, welding, and high temperature work areas. Determine actual exposure by industrial hygiene monitoring.					
<u>Substance</u>	<u>TLV</u>	<u>PEL</u>	<u>Substance</u>	<u>TLV</u>	<u>PEL</u>
Aluminum fume	5	5	Nickel (soluble)	0.1	1
Carbon Monoxide		55	Nitrogen dioxide	9 ( c )	
Chromium (Chromates)	0.05	.1 ( c )	Ozone	0.20 ( c )	0.2 ( c )
Copper fume	0.2	0.1	Silica (amorphous)	10	80
Iron Oxide fume	5	10	Titanium oxide	10	15
Manganese fume	0.2	5 ( c )	Welding fume	5	5
Molybdenum (soluble)	5	5	(Total Particulate)		

\*C= ceiling limit TLV & PEL in mg/m<sup>3</sup>

## Section VI – Toxicological Properties

**Routes of Entry:** Inhalation of dust and fume, eye or skin contact with dust or fume.  
**Short Term Exposure:** Acute exposure may cause irritation of the eyes or skin. Inhalation may give a metallic taste, head ache, nausea, chills, fever, irritation of the respiratory tract, cough.  
**Long Term Exposure:** Chronic exposure may cause skin sensitization, asthma, bronchitis, lung fibrosis or pneumoniosis. It may also cause damage to the kidneys and liver as well as the nervous

system.  
Chromates and soluble nickel compounds are confirmed human carcinogens.

## Section VII - Precautions for Safe Handling and Use

If dust or fume gets into eyes, irrigate immediately. If irritation persists, seek medical attention. If contact with skin occurs, wash with soap and water. If a rash develops, seek medical attention. If person breathers in large amounts of dust and fume, remove from exposure. Seek medical help if respiratory irritation persists.

## Section VIII - Control Measures

**Eye protection and protective clothing:** Safety equipment when brazing, cutting or welding should include nonflammable clothing, gloves and glasses, goggles or face shields with the appropriate lens shade.

**Respiratory Protection:** Necessary when exposure limits are exceeded. Use an air supplied respirator in confined spaces. Keep head out of fumes. Use industrial hygiene air monitoring to ensure that TLV or PEL values are not exceeded.

**Ventilation:** Ensure adequate ventilation or use local exhaust when brazing, cutting or welding. Special precaution should be taken in confined spaces.

**Waste Disposal:** The wire is non-toxic. Recycle or dispose according to local regulation.

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