



### I. MATERIAL IDENTIFICATION

**Product Class:**  
Copper

**Manufacturer:**  
B & B Sheet Metal  
2540 50<sup>th</sup> Ave.  
Long Island City, NY 11101-4421

**Telephone:** (718) 433-2501

**Fax:** (718) 433-2709

**Website:** <http://www.bbsheetmetal.com>

**PRODUCTS COVERED** (product includes the following copper alloy numbers)

101	210	314	356	413	505	651	710	757
102	220	316	360	422	508	655	715	762
103	226	330	365	425	509	670	725	770
104	230	332	371	430	510	675	735	782
110	240	335	377	434	511	680	740	792
120	260	340	380	462	519	681	741	
122	268	342	385	464	521	687	743	
143	270	345	405	465	524	690	745	
145	272	350	410	482	544	694	752	
192	280	353	411	485	642	706	754	

### II. HAZARDOUS INGREDIENTS

<i>Ingredient</i>	<i>Percentage Weight</i>	<i>Exposure Limits OSHA PEL</i>	<i>Exposure Limits ACGIH TLV</i>
Copper	45-99+	0.1 mg/M <sup>3</sup> (dust or fume)	1 mg/M <sup>3</sup> 2 mg/M <sup>3</sup> (dust)
Zinc	0-65	5 mg/M <sup>3</sup> (ZnO fume)	5 mg/M <sup>3</sup> (ZnO dust or fume)
Lead	0-5.5	0.05 mg/M <sup>3</sup>	0.15 mg/M <sup>3</sup>
Cadmium	0-2	0.2 mg/M <sup>3</sup>	0.05 mg/M <sup>3</sup>
Tin	0-3	2.0 mg/M <sup>3</sup>	2 mg/M <sup>3</sup>
Arsenic	0.0-0.15	0.01 mg/M <sup>3</sup>	0.02 mg/M <sup>3</sup> , soluble compounds
Aluminum	0-15	10 mg/M <sup>3</sup>	
Iron	0-6	10 mg/M <sup>3</sup>	
Manganese	0-5	1 mg/M <sup>3</sup>	
Nickel	0-33.0	1 mg/M <sup>3</sup>	
Silicon	0-4.5	10 mg/M <sup>3</sup>	
Tellurium	0-5	10 mg/M <sup>3</sup>	

Remaining components not determined hazardous and/or hazardous components present at less than 1.0% (0.1% for carcinogens).

### III. PHYSICAL DATA

**Freezing Point :**

**Melting Point:**  
1500-2100° F

**Boiling Point:**

**Specific Gravity:**  
7/5-9.0 g/cc

**Vapor Pressure:**

**Vapor Density:**

<p><b>Appearance and Odor:</b> Gold to yellow to red solid at room temperature having various shapes and dimensions. The product is insoluble in water and exhibits no odor.</p>
<p><b>Other:</b></p>

<p><b>IV. FIRE AND EXPLOSION HAZARD DATA</b></p>
<p><b>Flammability :</b></p>
<p><b>Flash Point:</b></p>
<p><b>Firefighting Procedures:</b> Use a water spray to cool fire-exposed containers, structures and protect personnel.</p>
<p><b>Unusual Fire and Explosion Hazards:</b></p>
<p><b>Additional Information:</b></p>

<p><b>V. REACTIVITY DATA</b></p>
<p><b>Reactivity:</b></p>

<p><b>VI. HEALTH HAZARD INFORMATION</b></p>			
Route of Entry	Acute Exposure	Chronic Exposure	First Aid Measure
Inhalation	No exposure under normal conditions. Exposure to dust or fumes may cause respiratory tract irritation.	Repeated or prolonged exposure to respirable dust or fume may cause mixed pneumoconiosis and "metal fume fever". Symptoms may include metallic taste, thirst, abdominal pain, vomiting, bloody diarrhea, nose bleeding, headache, fever, chills, muscle aches, dry cough and chest pain.	Remove affected person from source of exposure. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, give oxygen. Get immediate medical attention.
Eye Contact	No exposure under normal conditions. Abrasive action from dust or splinters may cause damage to the outer surface of the eye.	Slightly to moderately irritating if contacted with powdered material.	Flush immediately with large amounts of water. Eye lids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
Skin Exposure	Slightly to moderately irritating.	Repeated or prolonged skin contact may cause reddening, itching, and inflammation. May cause allergic reactions in some individuals	Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.
Ingestion		Symptoms may include metallic taste, thirst, abdominal pain, vomiting and bloody diarrhea.  Slightly toxic if powdered material ingested.	If victim is conscious, give 1-3 glasses of water or milk and induce vomiting. Do not make an unconscious person vomit. Keep affected person warm and at rest. Get immediate medical attention.
<p><b>Additional Information:</b> No exposure under normal conditions.</p> <p>For alloys containing lead, or lead coated, exposure to respirable dusts or fumes or ingestion of powdered material may produce signs of polyneuritis, diminished vision and peripheral neuropathy, such as tingling or loss of feeling in the fingers, arms and legs. May also cause anemia, irregular heart rhythm and renal, brain and immune system damage. May cause adverse reproductive effects. Damages genetic material in mammalian test systems.</p> <p>For alloys containing cadmium or arsenic: Cadmium has been determined to be a known animal and suspected human carcinogen by IARC and NTP; arsenic has been determined to be a known human carcinogen by IARC and NTP.</p>			

*VII. SPILL OR LEAK PROCEDURES*

*Procedures:*

*Waste Disposal:*

*Additional Information:*

*VIII. SPECIAL PROTECTION INFORMATION*

*Eye :*

When generating dust, wear safety glasses or chemical goggles to prevent eye contact. Do not wear contact lenses. Have eye baths readily available where eye contact can occur.

*Skin :*

*Respiratory :*

*Ventilation :*

*Other :*

*Additional Information :*

*IX. SPECIAL PRECAUTIONS*

*Handling and Storage :*

*Additional Information :*