



Material Safety Data Sheet

Low Fuming Bronze: Bare and Flux Coated

Section 1: Product Information

Supplier's Name



Manufacturer's Name

Refer to Supplier

Address

2300 Winston Park Dr
Oakville, ON L6H 7T7

Address

Refer to Supplier

Telephone Number

(905) 829-8780
1-800-268-4833

Telephone Number

Refer to Supplier

Trade Name: N/A

Chemical Formula:N/A

Product Use

For welding or brazing

Section 2: Hazardous Ingredients

Hazardous Ingredients	Approximate Concentration %	CAS Number	PEL (mg/m3)	TLV-ACGIH (mg/m3)
Copper	56.0-60.0	7440-50-8B	0.1	0.2
Zinc	Balance	1314-13-2	5.0	5.0
Tin	0.8-1.1	7440-31-5	2.0	5.0
Manganese	0.01-0.50	7439-96-5	5.0(ceiling)	1.0 (fume)
Iron	0.25-1.2	1309-37-1	10.0	5.0
Silicon	0.04-0.15	7440-21-3	Not listed	10.0
Flux coating	% of total weight			
Boric Acid	Over 50	10043-35-3	15.0	10.0
Borates	Over 25	1330-43-4	Not listed	1.0
Toluene	Over 10	108-88-3	200 ppm.*	375
Remaining Binder	Under 10	Non-Hazardous		

* time weighted average

Section 3: Physical Data

Physical State: Solid	Boiling Point:N/A
Odour and Appearance: N/A	Melting Point: 1600 °F
Odour Threshold(PPM): N/A	Solubility in Water: N/A
Specific Gravity: N/A	% Volatile (by Volume): N/A
Vapour Pressure(MM): N/A	PH: N/A
Vapour Density (Air =1): N/A	Coefficient of Water/Oil Distribution: N/A
Evaporation Rate: N/A	

Section 4: Fire or Explosion Hazard

Flammable: Product is non-flammable.

Means of Extinction: N/A

Flashpoint: N/A

Upper Flammable Limit (% by volume): N/A

Lower Flammable Limit (% by volume): N/A

Auto ignition temperature: N/A

Hazardous Combustion Products: N/A

Explosion data-sensitivity to mechanical impact: None

Explosion data-sensitivity to static discharge: None

Section 5: Reactivity Data

Chemical Stability: Yes

Incompatibility to other substances: N/A

If so, which ones? N/A

Reactivity under what conditions? N/A

Hazardous decomposition products:

Welding fumes and gases cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, procedures and filler metal being used.

Other conditions which also influence the composition and quantity of the fumes and gases to which workers may be exposed include: coatings on the metal being welded (such as paint, plating, galvanizing, etc.), the number of welders and the volume of the work area, the quality and amount of the ventilation, the position of the welder's head with respect to the fume plume as well as the presence of contaminants in the atmosphere (such as chlorinated hydrocarbon vapours from cleaning and degreasing activities).

When the filler metal is consumed, the fume and gas produced are different in percent and form from the ingredients listed in the section Hazardous Ingredients. Decomposition products of normal operation include those originating from the volatilization reaction, or oxidation of the materials shown in the section Hazardous Ingredients, plus those from the base metal and coating, etc.

One recommended way to determine the composition and quantity of fumes and gases to which workers are exposed is to take an air sample inside the welder's helmet if worn or in the worker's breathing zone. (See ANSI/AWS F1.1 available from the "American Welding Society", also F1.3 "Evaluating Contaminants in the Welding Environment-A Sampling Strategy Guide", which gives additional advice on sampling).

Section 6: Toxicological Information

Over exposure to welding fumes may result in discomfort such as dizziness, nausea; dryness or irritation of nose, throat and eyes.

Welding arc from the Electric Welding Process, creates fumes as well as intense ultraviolet radiation which produces ozone. Over exposure to ozone can result in mucous membrane irritation, as well as pulmonary changes including irritation, congestion and edema. Pulmonary effect (edema) can be delayed in onset.

Certain chromium compounds (e.g. hexavalent chromium) have been shown to cause lung cancer by inhalation. Hexavalent chromium compounds may be generated during welding operations.

The potential for over exposure to copper fumes may exist when welding on alloys containing counts of copper greater than 2.5%. Over exposure to copper fumes can result in upper respiratory tract irritation, nausea and Metal Fume Fever.

Exposure Limits	See Section 2	Reproductive Toxicity	N/A
Irritancy of Material	N/A	Teratogenicity	N/A
Sensitization to Material	N/A	Mutagenicity	N/A
Carcinogenicity	No	Toxicologically synergistic products	N/A

Section 7: Preventive Measures

Personal Protective Equipment:

Eye Protection: Wear helmet or use face shield with appropriate filter lens. Provide protective screens and goggles, if necessary, to shield others.

Respiratory Protection: Use NIOSH approved or equivalent fume respirator or air supplied respirator when welding in confined spaces or where local exhaust or ventilation does not keep exposure limit below TLV.

Protective Clothing: Wear hand, head, and body protection which helps to prevent injury from radiation, sparks, and electrical shock. At a minimum this includes welder's gloves and protective face shields with filter lens, and may include arm protectors, aprons, hats, shoulder protection, as well as dark substantial clothing. Ultraviolet radiation can cause irritation or flash burns to eyes and skin. Train the welder not to touch live electrical parts and to insulate himself from others.

Engineering Controls: Use enough ventilation, local exhaust at the arc; or both to keep the fumes and gases below TLV'S in the worker's breathing zone and the general area. Train the welder to keep his/her head out of the fumes. Endeavour to control the total welding fumes to below 5 mg/m³. Refer to Health Hazard Data Section 6.

Section 7: Preventive Measures (continued)

Leak or Spill Procedure: N/A

Handling Procedures and Equipment: Wash hands thoroughly after using these products.

Waste Disposal: Prevent waste from contaminating surrounding environment. Used and unused product should be tested to determine status and disposal requirements under local, provincial and federal regulations.

Storage Requirements: N/A

Special Shipping Information: N/A

Section 8: First Aid Measures

Eye Contact: Flush with water for at least 15 minutes. Get medical attention if irritation persists.

Inhalation: Remove from exposure. Get medical attention if experiencing breathing difficulty. If breathing has stopped, perform artificial respiration.

Skin Contact: Remove particles by thoroughly washing with soap and water. In case of thermal burns, flush with water for at least 15 minutes.

Ingestion: Ingestion is not likely to occur. To further reduce the possibility, maintain good hygiene habits

Section 9: Preparation Information

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American National Standard Z49.1 Safety in Welding and Cutting, published by the American Welding Society, 2501 N.W. 7th St., Miami, Florida, 33123. OSHA Safety and Health Standard 29 CFR 1910. Canadian CSA Standard W117.2.1974, Code for Safety in Welding and Cutting.

The manufacturer believes this data to be accurate and to reflect qualified expert opinion regarding current research. However, the manufacturer cannot make any express or implied warranty as to this information