

Belmont

Belmont 2% Boron Copper

Boron copper has gained recognition in recent years as one of the best deoxidizers and degasifiers for pure copper and copper and nickel-base alloys. It is especially useful for pure copper castings since it does not reduce conductivity. Other deoxidizers reduce casting conductivity drastically. The production of copper castings with well over 90% conductivity is possible when the proper melting and deoxidation procedures are used.

2% boron copper is used to eliminate gas holes, porosity and metal oxides while providing the added benefit of increased fluidity. The resultant castings typically exhibit finer grain structure and greater strength.

Belmont 2% Boron Copper is a solid piece of metal in alloy form which readily dissolves in the molten metal without reactions or disturbance. This is not always the case with calcium boride encased in a copper cartridge or tube, which may pick up moisture.

Suggested Application Practice

Belmont 2% Boron Copper is usually added at the rate of one pound of boron copper per 100 pounds of molten metal. The amount used may need to be increased if increased gas pick up is suspected, or with high nickel content alloys.

The melting and pouring temperature for pure copper or other alloys should be the same as usual. A cover on the melt, particularly on pure copper, helps prevent excessive gas pick up. A dry charcoal cover is used by many foundries.

Belmont 2% Boron Copper should be added shortly before the metal is poured—after the cover, slag and oxides have been removed from the melt. If gates and risers are added to cool overheated metal, they should be added after the addition. The boron copper should be plunged to the bottom of the crucible, using a graphite rod or other device. This is important, since boron copper always works upward, not downward. After it has reacted for a few minutes, a test plug should be poured. If the test plug puffs up, an additional treatment with Belmont 2% Boron Copper is required. If the plug shows a shrink on the top (concave), the metal is ready to pour.

Forms Available

Belmont 2% Boron Copper is normally available in a 40-section, 15-pound waffle; 4 to 5 ounce pieces; and shot (polished or unpolished). Other shapes are available upon request.

NOTE: The information contained in this data sheet is the most accurate in our possession at the time of publication, and is based on our effort to meet accepted industry references, standards, and specifications. However, Belmont cannot assume responsibility for in-service performance of these products due to our lack of control over, or supervision of, their use.

Belmont: *The Non Ferrous Specialists*

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Custom shapes and compositions available.



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