



UltraBraz® Furnace Brazing Alloy

UltraBraz® is specifically designed for furnace brazing applications and is especially effective in overcoming the challenges of large gap steel-to-steel brazing.

Delivering consistent brazing results with a single pass, UltraBraz's joint strength, wetting and filling characteristics are superior compared with traditional CDA 102 or 110 alloys.

Advantages of using UltraBraz:

- Improved wetting into weld joints with reduced puddling and run-off
- Consistent, predictable results
- Improved joint quality, appearance and strength
- Increased productivity
- Cost savings associated with lower energy consumption, redundant operations and the elimination of flux or binder
- Less scrap and improved throughput



About Luvata

Luvata is a world leader in metal solutions manufacturing and related engineering services to industries such as renewable energy, automotive, healthcare, and power generation and distribution. The company's continued success is attributed to its longevity, technological excellence and strategy of building partnerships beyond metals. Employing over 1,400 staff in 7 countries, Luvata works in partnership with customers such as ABB, CERN, Siemens and Toyota. Luvata is a group company of Mitsubishi Materials Corporation.

Furnace brazing is a method of joining two or more pieces of metal, usually carbon or stainless steel, often using pure copper (CDA 102 or 110 alloy) or a paste mixture consisting of pure copper powder and a binder or flux. Problems with this method include puddling or run-off, which adversely affect the joint strength and deliver inconsistent results.

UltraBraz offers superior wetting and even flow, automatically adapting for gap variances to produce uniform fillets. In loose fit testing, as gaps increased the shear strength associated with UltraBraz increased >50%.

Using UltraBraz, instead of traditional CDA 102 and 110 alloys, eliminates the need for flux or binder along with the costs associated with rework and defects while delivering consistent, predictable results.

Applications for UltraBraz:

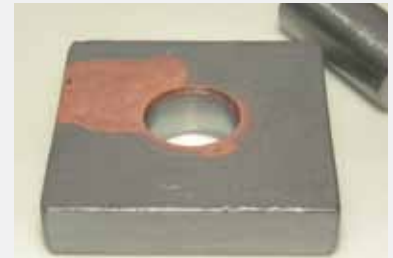
- Aircraft
- Automotive
 - Torque converters
 - Muffler hanger brackets
 - Fuel rails
- Lawn and Garden
- Marine
- Brazing various stampings, castings, machine screw and other piece part applications

Patent pending UltraBraz consists of 4.5% zinc, 2% iron and copper and is available in the following forms:

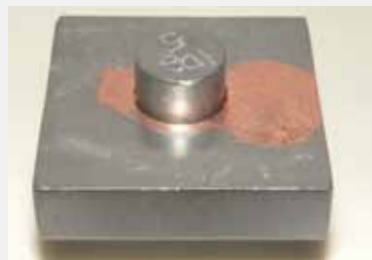
- Wire
- Rings
- Slugs



Test piece before brazing



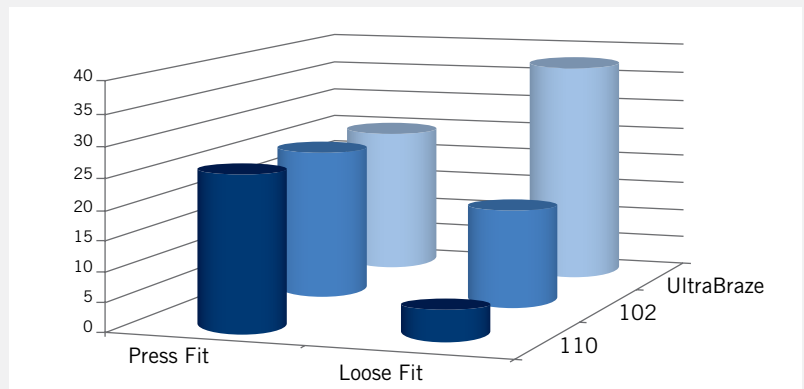
110 Alloy



102 Alloy



UltraBraz



Comparison shear stress (ksi) in Press Fit and Loose Fit testing



Slugs



Rings

