

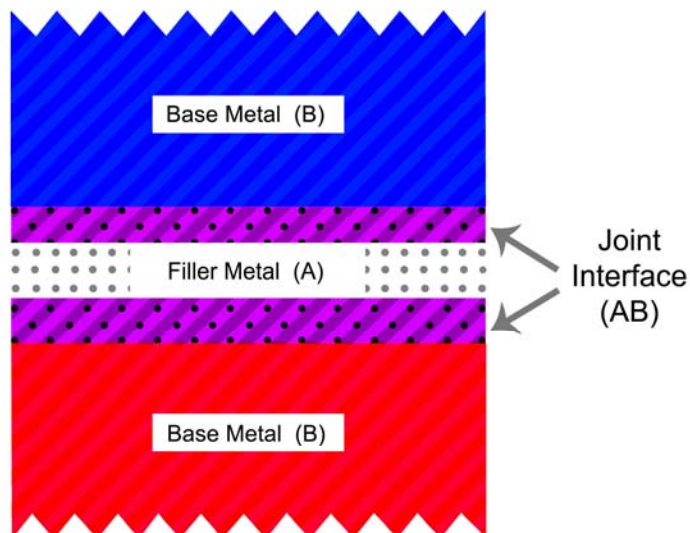


How Brazing Works

maximum assembly strength & seal

Brazing is a joining process where bonding between metal parts is produced by heating to suitable temperatures above 840° F (449°C), using nonferrous filler metals having melting temperatures below those of the base metals.

Brazing filler metal is introduced at one or more points along the joint between two base metals, and heated by conduction from the parts. When molten, it is distributed throughout the joint by capillary attraction. The resulting continuous joint provides a tight, *leak-proof seal*.



Brazing's *high strength* can be explained by examining a joint cross-section. When the filler metal flows out onto the base metal, a process called wetting occurs. To oversimplify, the filler metal (A) dissolves and reacts with the base metal (B) forming a thin layer called the joint interface (AB). This layer cools to form a totally different metal – actually an alloy of the base and filler metals. Thus, the brazed joint becomes a “sandwich” of different layers, each metallurgically linked to the next. The resulting joint is actually stronger than the base metals being joined.



Fusion Paste Alloys deliver all the ingredients for a strong, void-free brazed joint in one deposit. Finely atomized filler metal, proper flux, and special binders are blended into one homogeneous mixture. Automatic dispensers apply the paste in consistent, measured amounts – especially cost-effective for production brazing operations. If you have a brazing application, we would like to hear from you. Contact us today!



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