WALLCOLMONOY
HI TEMP BRAZING ALLOYS

WALLCOLMONOY CORP. (USA)
TECHNICAL DATA SHEET

CuBraz Filler metal is powdered copper pre-mixed with a binder. It is easily applied with air-powered applicator, prior to furnace brazing.

CuBraz™

Copper Brazing Filler Metal, Effective in the Brazing of Iron or Steel Assemblies

Description:

CuBraz is a copper Brazing Filler Metal, effective in the brazing of iron or steel assemblies in most kinds of controlled-atmosphere furnaces. CuBraz is an especially effective Brazing Filler Metal for joining steels, from low carbon to high alloy. With its good ability to wet iron and steel, it forms strong joints. CuBraz contains copper metal, rather than copper oxide, as the source of its copper content. This results in improved flow properties, fewer atmosphere problems, and the use of less material per joint. CuBraz has an exceptionally high, uniform metal content, which eliminates the incidence of rejects caused by variations in metal content.

CuBraz offers special advantages in the application stages of its use. It applies fast, permits reasonably exact control of the amount put down, adheres readily to work surfaces, and reduces waste. These advantages make it very useful for production work.

Forms Available:

Powder: Standard -140 or -325 mesh (-106 or -45 µm)* atomized powder; special size distributions upon request.

Paste: Powdered metal held in suspension in a proprietary gel-type binder. It is packaged in plastic cartridges for use in air-powered applicator.

Standard cartridge size: 2.5 oz. net weight

Properties:

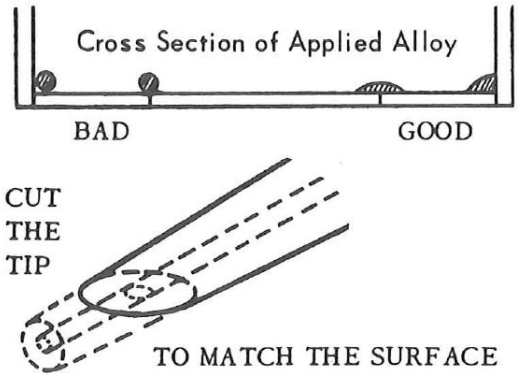
The suspending medium used features excellent stability, flow, and drying properties, and vaporizes completely under furnace heat. There is a binding agent which gives a dry strength to applied powder similar to that imparted by Nicrobraz Cement. The vehicle is non-flammable, non-toxic and odor-free. Special ventilation is not required in the area where it is applied.

How To Use:

The use of air-powered applicators (powered by shop air) is not difficult and sufficient skill is quickly attained. The cartridges will fit most industrial units used to apply sealants and mastics.

CuBraz applied with an air applicator will remain where placed best if it is correctly applied. Care must be taken that the CuBraz "bead" has good, broad contact with the base metal. See image on following page.

** AWS 5.8 Standards*



Properly applying CuBraz Filler metal.

As with deposits of cement-filler metal mixtures, brazing cannot begin after application of CuBraz until the applied alloy paste dries. Drying time is dependent on cross-section size of the bead, and atmospheric conditions. Drying can be hastened by warming the assembly, but not in excess of 300°F (149°C).

How To Braze:

Brazing can be done in a wide variety of furnaces (pusher, belt, roller, bell) with various atmospheres. The table below indicates recommended atmospheres for steel alloy groups.

Brazing temperatures are in the 2040 - 2100°F range (1115 - 1150°C).

Safety:

When handling metal powder alloys, avoid inhalation or contact with the skin or eyes. Conduct application operations in a properly ventilated area. For more information, consult, OSHA Safety and Health Standards available from U. S. Government Printing Office, Superintendent of Documents, P. O. Box 371054, Pittsburgh, PA 15250, and the manufacturer's Material Safety Data Sheet (MSDS). Read and understand the manufacturer's material safety data sheet before use.

Storage Requirements:

To prevent drying or hardening in the cartridges, store them in a cool place, preferably a refrigerator. **IMPORTANT:** KEEP FROM FREEZING.

Keep powders in a closed container and protect against moisture pick-up. The containers should be tumbled before using the powder. If moisture is adsorbed from the atmosphere, it can be removed and flowability can be restored by drying the powder, with the seal removed and lid loosened, at 150 - 200°F (66 - 93°C) for two hours prior to use.

Furnace Atmosphere				
Steel Alloy Group	**Exothermic 10°F dew point**	**Dissociated Ammonia -40°F dew point or lower**	**Hydrogen -40°F dew point or lower**	**Inert -40°F dew point or lower or vaccum below 0.1 Torr**
Low Carbon (Less than .25%)	Recommended	Recommended	Recommended	Recommended
High Carbon* (More than .25%)	Not Recommended	Recommended	Recommended	Recommended
Low Alloy (Less than 5% Cr, Mn, Si, etc.)	Not Recommended	Recommended	Recommended	Recommended
High Alloy (More than 5% Cr, Mn, Si, etc.)	Not Recommended	Recommended	Recommended	Recommended
Stainless Steels	Not Recommended	Recommended	Recommended	Recommended

** Also recommended in Endothermic Furnace Atmosphere (0 - 50°F (0 - 10°C) dew point).*

The information provided herein is given as a guideline to follow.
It is the responsibility of the end user to establish the process information most suitable for their specific application(s).
Wall Colmonoy Corporation (USA) assumes no responsibility for failure due to misuse or improper application of this product, or for any incidental damages arising out of the use of this material.

updated March 2014