

CUPRO-FLO™ 200

Cupro-Flo[™]

PRODUCT DESCRIPTION

Cupro-Flo 200 brazing paste product is designed for brazing copper and brass components used in industrial and automotive heavy-duty trucks and earth moving equipment heat exchangers.

Cupro-Flo 200 is a slurry consisting of a brazing filler metal powder LM 69-024, small amount of flux, an organic polymer, and low odor, volatile organic compound containing (VOC) solvents that are quick drying and have an evaporation rate near 0.3 (butyl acetate = 1.0). Since the flash point of the solvent is 110°F, the product is non-flammable at room temperature. The product is designed for use on tube to header joints. It is applied to the header by pouring methods or dispensable methods. The product is pre-mixed and ready for use. It is recommended to re-mix the product by paint shaker or paint mixer prior to use.

Additionally, Cupro-Flo 200 is available in a VOC-exempt version and contains an even faster evaporating solvent and has an evaporation rate near 0.9 (butyl acetate = 1.0). The flash point of the VOC exempt solvent is near 110°F, so the product is non-flammable at room temperature. Lastly, the VOC-exempt slurry has more odor when compared to the VOC-containing product. Therefore, adequate ventilation is necessary for the application of this slurry.

NOMINAL COMPOSITION

Braze Filler Metal: LM 69-024

Phosphorus	6.50% ± 0.25%
Nickel	5.0% ± 0.5%
Tin	10.0% ± 0.5%
Copper	Balance

PHYSICAL PROPERTIES

Melting Range	1100°F - 1125°F (593°C - 607°C)
Metal Content	85%
Binder Content	15.0%
Density (gm/cm ³)	3.3 - 3.6

Cupro-Flo 200 slurry is recommended for brazing tube to header joints of multiple row radiators and charge air coolers. The material is applied after tubes and headers are assembled by either pouring methods or by slurry application equipment (see diagram below).

APPLICATION METHODS

Prior to brazing, individual components must be clean or free of oxide, grease, oil, dirt or any other foreign materials so material can adhere and flow properly.

HEADER COATING

Cupro-Flo 200 slurry is applied by either pouring methods or dispensing thorough automatic slurry applicator on the airside of the header. The slurry is then dried with hot air (250° F/125°C) to form a hard coating.

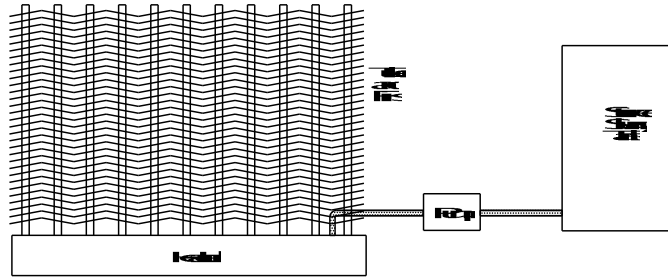


Figure 1.
 Slurry Application Method

BRAZING CHARACTERISTICS

Typical brazing is done in either batch or continuous furnace having controlled atmosphere like pure nitrogen or mixture of nitrogen and less than 10% hydrogen to prevent the oxidation of the components and braze material. Typical dew point of furnace is – 40°F (-40°C) and oxygen content must be below 10 ppm. To achieve best results, during assembly, one must ensure proper clearance for tube to header must be maintained. When assembly is held in fixture, one must allow components to expand and contract during brazing cycle to avoid bowing of assembly. See below the typical brazing cycle.

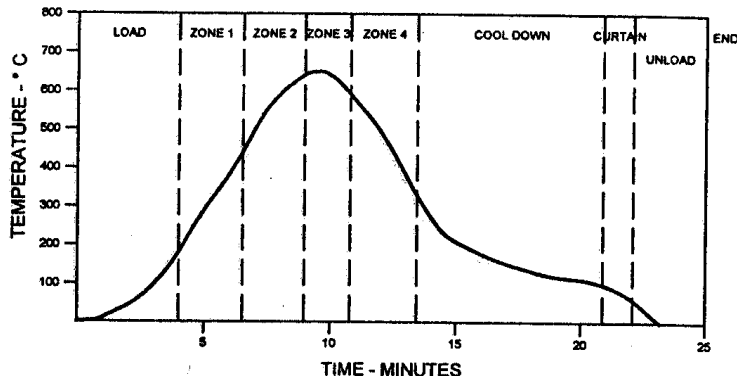


Figure 2.
 Typical Brazing Cycle

AVAILABLE FORMS

The standard packaging is 1-gallon plastic pail. Each pail contains either 20-lbs. or 10-kg of slurry. Other containers are available upon request. It is recommended to mix the product by paint shaker or jar by hand prior to opening to ease the mixing time before loading into applicator reservoir or tray.

SPECIFICATIONS

Cupro-Flo 200 alloy conforms to the following specifications: N/A

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 83-610/69-024/85C1.

SAFETY INFORMATION

The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For more complete information refer to the Material Safety Data Sheet for Cupro-Flo 200.

Use with proper precaution during application to ensure that all the OSHA, EPA and local regulation are met. Must read label and MSDS before use. Disposal of product must be in accordance with Environmental Protection Agency (EPA) and local regulation.

WARRANTY CLAUSE

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