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Handy-One® Flux Cored Silver Brazing Alloys Braze 560

This proprietary new family of brazing & soldering products eliminates the need for a separate fluxing operation, which can result in a significant increase in productivity while minimizing flux exposure to your personnel and plant equipment.

THE PRODUCT

Handy One is a trademark for a family of flux-cored brazing materials that offers numerous advantages compared to traditional metal joining methods. It consists of a filler metal in strip form that is rolled around a powdered flux. Formulations currently exist for silver (and aluminum based) brazing filler metals and it is available on spools, coils or rods for wire feed applications and as preformed rings and shapes for automated production lines.

Some of the primary advantages of Handy One cored wire include:

- It simplifies the brazing process by eliminating the manual fluxing operation; this also reduces flux exposure to your brazing personnel.
- Joint quality and throughput can be improved due to the consistent application of flux and filler metal.
- Reduces heating time and secondary post braze operations, increasing productivity and throughput
- Improved strength due to a reduction in flux inclusions at the joint interface
- Reduces the flux in your wastewater effluent by as much as 75%
- Multiple formulations exist for a variety of base metals, joint designs and heating methods.

These materials will join ferrous and non-ferrous metals including steel, stainless steel, copper, brass and bronze.

NOMINAL COMPOSITION

Silver	56.0% ± 1.0%
Copper	22.0% ± 1.0%
Zinc	17.0% ± 2.0%
Tin	5.0% ± 0.5%
Total Other Elements	0.15% max.

PHYSICAL PROPERTIES

Color	White
Solidus (Melting Point)	1145°F (620°C)
Liquidus (Flow Point)	1205°F (650°C)
Specific Gravity	9.42
Density (Troy oz./cu.in.)	4.96
Electrical Conductivity (% IACS)	8.32
Electrical Resistivity (Microhm-cm)	20.75
Recommended Brazing Temp. Range	1205°- 1305°F (650° - 705°C)

USES

Braze 560 is a silver-based brazing alloy used for ferrous and non-ferrous alloys in joints requiring a low temperature, cadmium-free alloy, as in food handling equipment. For improved corrosion resistance in joints on stainless steel, use alloys containing small amounts of nickel, such as Braze 630 or Braze 505.

BRAZING CHARACTERISTICS

Braze 560 is a low temperature, free-flowing brazing filler metal with a slight tendency to liquefy (i.e. separate into low and high melting constituents) if heated slowly through its melting range.

PROPERTIES OF BRAZED JOINTS

Butt joints have been brazed and tested for tensile strength at room temperature, on the listed metals, with the following results:

	Tensile Strength psi
Copper	25,000-30,000
Brass	30,000-40,000
Low Carbon Steel	40,000-50,000

BRAZING FLUXES AVAILABLE

Lucas-Milhaupt has several different fluxes available depending upon the material form (wire or preformed shape) as well as base metals and heating methods utilized.

Restrictive Flux – protects the parts being joined, yet restricts the flow of the filler metal, enabling the building of fillets and minimizing post braze secondary operations. This flux is recommended for most hand feed or wire feed applications. Flux content is typically 12% ($\pm 3\%$) of the total volume.

Free Flowing Flux – This very fluid flux provides excellent protection of your parts and facilitates filler metal flow. Recommended for preformed ring applications, it is typically 18% ($\pm 3\%$) of the total volume.

Heat Resistant Flux – Boron modified flux for large mass assemblies or long heating cycles. It is also typically 18% ($\pm 3\%$) of the total volume and also recommended for preformed ring applications.

Please Note: Flux percentages may vary depending upon material size and finished form, please contact Lucas-Milhaupt's Technical Services Department for specific product and process parameters.

SPECIFICATIONS

These filler metals conform to the following specifications:

AWS A5.8	BAg-7
ASME Boiler & Pressure Vessel Code Sec. II C, SFA-5.8	BAg-7
SAE/AMS	4763

AVAILABLE FORMS

Wire (.060" diameter and .075"), rod form (20 inch lengths of .075" dia.) and preformed rings and shapes to specification.

WARRANTY CLAUSE

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