

## Handy Flo® 475

### ***GENERAL DESCRIPTION***

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Handy Flo 475 is a clean burning fluxless binder systems used in controlled atmosphere furnace brazing of steel, stainless steel assemblies. This system is recommended for use in dry atmospheres such as nitrogen, hydrogen, dissociated ammonia and vacuum with minimum vacuum level of  $10^{-4}$  Torr. Handy Flo 475 is recommended for use in dry atmosphere settings i.e. -40°F to -60°F. Handy Flo 475 has been formulated for dispensing applications using automated dispensing equipment.

### ***PRODUCT APPLICATION***

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Handy Flo 475 is recommended for use with braze filler metals that flow above 1700°F (927°C) and include: nickel and gold based brazing alloys, as well as active metal. This product has excellent dispensability at low pressures, with little to no tailing after each deposit. This is a fast drying binder system.

### ***BRAZING CHARACTERISTICS***

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Handy Flo 475 offers excellent vertical slump characteristic as long as it is not sheared/mixed aggressively prior to application. The paste deposit will remain in place and will not spatter during the initial stages of the heating process. Handy Flo 475 dries quickly and will not flake off the parts prior to heating operation; this allows pre-pasting of assemblies several hours prior to brazing operation. Handy Flo 475 is a clean burning binder system with carbide forming elements.

### ***WARRANTY & STORAGE***

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Lucas-Milhaupt, Inc. warrants their Brazing and Soldering Paste products for 90 days from the date of shipment if stored in the original unopened container. Optimal storage conditions would be 40°F (4°C) - 45°F (7°C), clean and dry. It is recommended that the paste products are stored away from direct heat. Paste may require mixing to regain a homogenous mixture before application.

The 90 day warranty should not be interpreted as the shelf or useful life of the product. The paste products may be used well beyond the 90 day warranty, unless customer testing or production results indicate unsatisfactory performance of the product.

### ***AVAILABLE PACKAGING***

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Handy Flo 475 is available in various size syringes. Paste should not be mixed aggressively after receiving, due to a potential loss of viscosity.

### ***SPECIFICATIONS***

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Handy Flo 475 conforms to the following specifications: N/A

### ***APPLICABLE PRODUCT CODE(S)***

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The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 83-475 (X4994-1).

### ***SAFETY INFORMATION***

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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 Handy Flo 475.

## ***WARRANTY CLAUSE***

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