

Handy Flo[®] 150 (FB Dispensable) DF 150
Handy Flo[®] 160 (FB1 Dispensable) DF 160

GENERAL DESCRIPTION

Handy Flo 150 is a high fluidity general purpose fluxing system, which has been specially formulated for dispensing applications using automated dispensing equipment. When used with appropriate silver bearing braze filler metal, Handy Flo 150 will provide sufficient fluxing action to join most ferrous and non-ferrous metals providing high strength and hermetically sealed joints. This system is recommended for automated brazing operations that require flux deposit to remain in place and not flake off or blow off the assembly during initial stages of heating operation. This product has been used in applications where controlled amount of flux is needed each time the product is applied.

This system is recommended for use in most brazing applications including torch, induction, resistance and air furnace heating methods. Handy Flo 150 is not recommended for use in a vacuum or controlled atmosphere furnace brazing operations. This product is more active but has a shorter life at temperature in comparison to other available systems in the Handy Flo 100 series. Handy Flo 150 is more fluid than Handy Flo 120 and not as restrictive as Handy Flo 110 and Handy Flo 130 systems. Handy Flo 150 system is generally recommended for brazing of small size assemblies with fast heat brazing cycles.

Handy Flo 160 is a boron containing version of Handy Flo 150. The Handy Flo series are generally used in paste formulations containing braze filler metal, whereas DF 150 & DF 160 are dispensable versions of Handy Flo 150 and Handy Flo 160 distributed as flux formulations only without the braze filler metal content.

PRODUCT APPLICATION

Handy Flo 150 is recommended for use with braze filler metals that flow between 1100°F - 1500°F (593°C - 815°C). This product is recommended for use with many of the common Silvaloy[®] formulations which include silver, copper, zinc and tin or nickel, and Easy-Flo[®] alloy formulations which include silver, copper, zinc and cadmium. Handy Flo 150 has been used in various applications including electronic/electrical, automotive, plumbing, and construction industries. Handy Flo 160 includes an addition of boron and provides an additional 100°F (38°C) of surface protection up to 1600°F (871°C). Handy Flo 160 is recommended for joining of stainless steels, carbides, malleable iron or other hard to braze base metals.

BRAZING CHARACTERISTICS

Handy Flo 150, Handy Flo 160, DF 150 and DF 160 will exhibit restrictive slump characteristics and can be used on vertical joints. These products are corrosive and a post-braze cleaning or rinsing operation is required. The flux residue is easily dissolved in hot water at temperatures of 120°F (49°C) or higher.

WARRANTY & STORAGE

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 65°F (18°C) - 75°F (24°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

Handy Flo and DF products are available in various size syringes, jars and cartridges. Paste may also be obtained in large containers prepackaged for immediate pneumatic dispensing operations.

SPECIFICATIONS

Handy Flo 150 conforms to the following specifications: N/A

Handy Flo 160 conforms to the following specifications: N/A

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 83-150,83-160.

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 Handy Flo 150/DF 150 or Handy Flo 160/DF 160.

WARRANTY CLAUSE

Lucas-Milhaupt, Inc. believes the information contained herein to be reliable. However, the information is given by Lucas-Milhaupt, Inc. without charge and the user shall use such information at its own discretion and risk. This information is provided on an "AS IS" AND "AS AVAILABLE" basis and Lucas-Milhaupt, Inc. specifically disclaims warranties of any kind, either express or implied, including, but not limited to, warranties of title or implied warranties of merchantability or fitness for a particular purpose. No oral advice or written or electronically delivered information given by Lucas-Milhaupt, Inc. or any of its officers, directors, employees, or agents shall create any warranty. Lucas-Milhaupt, Inc. assumes no responsibility for results obtained or damages incurred from the use of such information in whole or in part.