

## **Technical Data Sheet**

### Handy Flux<sup>®</sup> Hi-Temp Boron Modified (BM)

### **GENERAL DESCRIPTION**

Handy Flux<sup>®</sup> Hi-Temp Boron Modified (BM) is water based active fluoride/borate-type flux in paste form, which has been specially formulated to give excellent adhesion when dipped or brushed on parts. It is recommended for use with filler metals that flow between 1600°F (871°C) - 2200°F (1204°C). The flux provides excellent protection of parts up to 2200°F (1204°C).

#### **PRODUCT APPLICATION**

Handy Flux<sup>®</sup> Hi-Temp BM is primarily used as a general purpose brazing flux in brazing applications involving brazing of steel, stainless steel, copper, copper alloys, nickel, and nickel alloys with high melting brazing filler metals. This product is not recommended to use for aluminum bronze or other aluminum alloy brazing applications. Handy Flux<sup>®</sup> Hi Temp BM is suitable for use with most heating methods including torch, induction or furnace. This product exhibits excellent adhesion, less spattering and oxide removal capabilities during brazing process. Handy Flux<sup>®</sup> Hi Temp BM may be thinned with water to a smooth uniform consistency for brushing or dipping. The product exhibits excellent shelf life if stored in a dry place between 65°F (18°C) - 75°F (24°C). If stored for a long period of time some separation within the flux may occur. In such case stir the flux up until proper consistency is restored.

#### POST CLEANING

This product is corrosive and a post braze cleaning or rinsing operation is required. Mechanical and/or abrasive means i.e. wire brush, bead blasting, etc., may be needed to remove the flux residue.

#### WARRANTY & STORAGE

Lucas-Milhaupt, Inc. warrants their Water Based Fluxes for twelve months from the date of shipment if stored in the original, unopened container. Optimal storage conditions would be  $65^{\circ}F(18^{\circ}C) - 75^{\circ}F(24^{\circ}C)$ , cool and dry.

Twelve months should not be interpreted as the shelf or useful life of the product unless actual test results indicate unsatisfactory performance for the intended application. Flux beyond the warranty may be reconstituted to a working consistency by warming in a water bath and or by additions of distilled or de-ionized warm water.

Flux may require mixing, dilution or warming to regain its normal consistency prior to use. Flux, when placed on a U.S. standard 40 mesh (425 micron) sieve conforming to ASTM E11 and worked lightly with a brush shall pass completely through the sieve. If the flux has partially coagulated in the container, the flux may, before conducting the test, be warmed in a water bath until it has returned to its normal consistency.

#### AVAILABLE PACKAGING

Handy Flux<sup>®</sup> Hi Temp Boron Modified is available in a variety of packaging options including 1/2 lb, 1 lb, 5 lb, 25 lb and 50 lb containers.

#### **SPECIFICATIONS**

Handy Flux<sup>®</sup> Hi Temp Boron Modified conforms to the following specifications:

- o American Welding Society (AWS) A5.31 FB3D
- o Society of Automotive Engineers (SAE) / AMS 3417

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

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 82-057.

#### 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 Flux<sup>®</sup> Hi-Temp Boron Modified.

#### 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.