

## Handy Flux<sup>®</sup> LS Black

### ***GENERAL DESCRIPTION***

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Handy Flux LS Black is a general purpose fluxing system, which has been specially formulated to provide excellent adhesion properties when dipped or brushed on parts. This product does not show water separation during storage and requires no thinning. Due to its excellent product consistency, Handy Flux LS Black does not crystallize reducing product variation. When used with appropriate braze filler metal, Handy Flux LS Black will provide adequate fluxing action to joint most ferrous and non-ferrous metals producing high strength and hermetically sealed joints. This system is recommended for automated brazing operations that require the flux deposit to remain in place and not flake off or blow off the parts during the initial phases of the heating operation. It is recommended to use with filler metals that flow between 1100°F (600°C) - 1700°F (926°C). The flux provides excellent protection of parts up to 1700°F (926°C).

This system is recommended for use in most brazing applications including torch, induction, and air furnace heating methods. Handy Flux LS Black is not recommended for use in a vacuum or controlled atmosphere furnace brazing operations. This product exhibits restrictive properties when molten. It does not require drying prior to brazing and it will remain in place and not flake off or blow off assemblies during the brazing process.

### ***PRODUCT APPLICATION***

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Handy Flux LS Black is primarily used as a general purpose brazing flux in brazing applications involving brazing of steel, stainless steel, tungsten, tungsten carbide, copper, copper alloys, nickel, and nickel alloys. It is not recommended to use in aluminum bronze or other aluminum alloy brazing applications. This product exhibits excellent adhesion, less spattering and oxide removal capabilities during brazing process. Handy Flux LS Black 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***

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This product is 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 (50°C) or higher.

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

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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°F (18°C) - 75°F (24°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***

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Handy Flux LS Black is available in a variety of packaging options including 1/2 lb, 1 lb, 5 lb, 25 lb and 50 lb containers.

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

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The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 82-116.

## ***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 Flux LS Black.

## ***WARRANTY CLAUSE***

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