

LTB42 and LTB42SSK

NOMINAL COMPOSITION

Aluminum	Remainder
Silicon	10.0% ± 1.0%
Iron	0.8% Max
Copper	0.3% Max
Titanium	0.2% Max
Other Elements (Each)	0.1% Max

PHYSICAL PROPERTIES

Color	Grayish-White
Melting Point (Solidus)	1070°F (577°C)
Flow Point (Liquidus)	1095°F (591°C)
Brazing Range	1095°F - 1120°F (591°C - 604°C)

PRODUCT USES

LTB42 and LTB42SSK are stable paste mixtures of aluminum/silicon filler and metallic salts used in dip brazing for joining a wide variety of aluminum alloys with simple or complex shapes and assemblies at low cost, high production rates. LTB42 and LTB42SSK is a substitute for brazing wire.

Add 3 parts water to 7 parts LTB42 to form a thick paste or slurry. This mixture can be applied by brushing, spatula, syringe or automatic paste dispensing systems. LTB42SSK is a pre-mixed brazing paste adjusted to a stable dispensing viscosity for all automatic and hand dispensers. If necessary, stir before using to insure proper consistency.

After paste application, assembly is placed in oven and heated to 1000°F (537°C). The time at temperature will depend on the mass of the parts plus the fixture. Preheating removes moisture and avoids a drain of heat from the salt bath.

The assembly is immersed in the salt bath (1100°F/ 593°C) to allow parts to reach brazing temperature without excessive alloying of the brazing alloy and the base metal.

Brazing salts can be removed by quenching in warm water.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. Joint clearances of 0.003 - 0.006 in (0.076 - 0.152 mm) per side are optimum for achieving highest joint strength. Joints with increased clearances can still produce adequate joint strengths depending on final operating conditions.

POST CLEANING

LTB42 and LTB42SSK contain a noncorrosive flux and require no post braze cleaning operation; however, if it is desired to remove the residue, a 50/50 mixture of nitric acid and distilled water will remove residue. Agitate the part in the solution for 30 seconds to remove all flux.

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

LTB42 and LTB42SSK are available in various size syringes, jars and cartridges.

SPECIFICATIONS

Aluminum powder chemistry is manufactured in accordance to the following specifications:

- AWS A5.8 (BA1Si-5)
- QQ-B-655 (FS-BA1Si-5)
- AA 4045
- Alcoa #714

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 84-363.

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 LTB42 and LTB42SSK.

WARRANTY CLAUSE

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