



SUPERIOR SOLDER PASTE ASP



DIRECT ALUMINUM SOLDERPASTE USING SN96.5/AG3.5

- Solders directly to aluminum for aluminum to copper and aluminum to aluminum connections
- Eliminating the need for plating aluminum before soldering
- Good thermal stability for heat sink reflow soldering

DESCRIPTION

Superior Solder Paste ASP is a water-soluble formulation designed for direct aluminum to copper soldering of heat sinks. It also has excellent soldering characteristics for copper and nickel-plated aluminum surfaces. The presence of silver in the solder alloy of the paste permits the creation of a true intermetallic bond between the solder and the aluminum.

APPLICATION

Superior Solder Paste ASP is made from Type 3 Powder (-325/+500 Mesh Powder) with a unique flux binding system to keep the very active aluminum flux portion of the flux from degrading the solder powder. The material should be refrigerated before use and when in storage. The ideal temperature for printing and dispensing the paste is 20°C – 23°C with a relative humidity of 35-55%.

Printing Parameters:

Squeegee Blade: 80 to 90 durometer polyurethane or stainless steel
Stencil Material: Stainless Steel, Molybdenum, Nickel Plated, Brass
Temperature/Humidity: Optimal ranges are 20-25°C and 35-55% Relative Humidity

DIRECTIONS

- ➊ For heat sink applications **Superior Solder Paste ASP** is normally via flat printing pattern the heat sink base. Heat pipe in fins have solder paste applied via syringe.
- ➋ Parts are passed through the reflow oven matching the necessary reflow pattern for the mass of the heat sink being soldered.
- ➌ Cleaning of the soldered part should be done in-line with hot water rinse followed by counterflowing cold water rinses then drying.

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PHYSICAL PROPERTIES

Density @ 20 °C (68 °F)	2.77 grams/liter
Viscosity @ 20 °C (68 °F)	650,000 – 750,000 kcps
Recommended Soldering Range	175 - 290 °C
Alloy Melting Point	221 °C
Odor	Mild
Flash Point	None
Freezing Point	None

CLEANING and STORAGE

Superior Solder Paste ASP is a water soluble paste formulation. All equipment in contact with the solder paste can be cleaned with water (followed by alcohol rinsing if rapid drying is needed).

Superior Solder Paste ASP should be stored with consideration of the effect that storage will have on the long term stability of the paste

- To achieve a shelf life of 12-18 months, store in a freezer below 0 °C.
- To achieve a shelf life of 3-12 months, store in a refrigerator, 1-12 °C.
- For non-refrigerated/frozen storage, maintain in a cool and dry location. Maximum temperature should not exceed 23 °C. A storage time of up to 3 months can be expected.
- Avoid direct sunlight.

SAFETY PRECAUTIONS

Superior Solder Paste ASP attacks many metals to some extent, it is recommended that polyethylene, PVC or fiberglass reinforced polyester containers be used. Avoid skin contact and/or breathing vapors. Wear gloves and eye protection.

This product, during handling or use, may be hazardous to health or the environment. Read the Material Safety Data Sheet and warning label before using this product.

The information contained herein is based on data considered to be accurate and is intended for use by persons having technical skills at their own discretion and risk. Since conditions of use are outside of Superior Flux & Mfg. Co.'s control, we cannot assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

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