

Technical Data Sheet

FeedBond® FP-6100-HP9

Low temperature sintering silver paste

Description:

FeedBond® FP-6100-HP9 is a low temperature pressureless sintering silver paste. It can be used in semiconductor packaging designs that require high electrical and thermal conductivity. For best performance, the wafers and substrates used must be gold or silver plated. It does not contain any resin components and is bonded with pure metal, which significantly improves the thermal conductivity of the product.

Application :

- High power packaged products.
- Packaged products that work in high temperature environments.
- SIP/QFN/LGA/HBLED

Characteristics:

- High shear strength at high temperature, and high electrical conductivity.
- Suitable for stamping and dispensing processes
- Excellent thermal conductivity.
- Can be sintered at low temperature (180-200°C).

| Specification | Value | Measure | Test Method |
|-----------------------------|--|--|-------------|
| Appearance | Silver paste | Visual | - |
| Metal Alloy | Silver powder | - | - |
| Silver content | >95% | | |
| Viscosity @ 25°C | 8,000~12,000 cps | Brookfield CP-51 @ 5rpm | FT-P006 |
| Thixotropic Index | 5.5 ~ 7.5 | Brookfield CP-51 Vis. @ 0.5rpm/5rpm | FT-P008 |
| Paste density | 6.3 g/cm ³ | Pycnometer/Balance | FT-P001 |
| Cure Condition* <2 x2 mm | 1. 20 min to 110°C and hold for 30-60 min; 30 min to 200°C and hold for 90min. 2. 20 min to 110°C and hold for 30-60 min; 30 min to 200°C and hold for 120min | Heat Cure | - |
| Cure Condition* >2 x2 mm | 1. 20 min to 110°C and hold for 60-90 min; 30 min to 200°C and hold for 120min. 2. 20 min to 110°C and hold for 60-90 min; 30 min to 200°C and hold for 150min. | | |

* The above sintering methods are only guidelines. Sintering conditions (time and temperature) may vary based on customer experience and application requirements. Customers can adjust it according to sintering equipment, oven load and actual oven temperature.

| Specification | Value | Measure | Test Method |
|----------------------|---------------------------|--------------------------------|-------------|
| Thermal conductivity | 140 W/mK | Hot Disk | FT-P022 |
| Volume resistivity | 4×10^{-6} Ohm-cm | Four-point probe | FT-P017 |
| DDS @260°C | >2 Kg-f | 1mm*1mm AuSn/Ag | |
| Work Life @ 25°C | 16hr | Viscosity increases 50% @ 5rpm | FT-P024 |
| Shelf Life @ -40°C | 6 months | -40°C | FT-P018 |

Instruction

Thawing

Place the container to stand vertically for 30~90min. **DO NOT** open the container before adhesive reaches ambient temperature to prevent the moisture condensation. Any moisture that collects on the thawed container should be removed prior to use. Adhesives that appear to have separated should not be used.

Storage

When receiving the product, please storage at low temperature (-20°C or -40°C) immediately. The shelf life of the material is only valid when the material has been stored at the correct storage condition.

| | | | | |
|---------------|-------------|--------------|----------|------------|
| Storage temp. | -35°C~-42°C | -18°C~ -22°C | 0°C~ 5°C | 18°C~ 28°C |
| Shelf life | 6 months | 3 months | 1 month | 2 days |

Transport

It is stored in a low-temperature ice bag during transportation to ensure product quality. When you receive the product and find that the ice pack has been completely thawed, please take a photo for storage and do not use it and notify our sales staff immediately.

Availability

FeedBond® adhesives are packaged in syringes or pots per customer specification. For the details, please contact our Customer Service or sales department.