Micromax™ LF6141

Electronic Inks and Pastes

Silver Cofireable Via Fill

Micromax™ LF6141 is a silver via fill compatible with Micromax™ GreenTape™ LF95C low temperature co-fired ceramic material system. Micromax™ LF6141 is ideally suited to provide reliable interconnection between Ag conductor layers.

Product benefits

When used with Micromax™ GreenTape™ LF95C and compatible via fill pastes, Micromax™ LF6141 offers the following benefits.

- Low cost, high conductivity metallization
- High density
- Cofire processing
- Cadmium, Lead, Nickel and Phthalate free*

*Cadmium, Lead, Nickel and Phthalate 'free' as used herein means that cadmium, lead, nickel, and phthalate are not intentional ingredients in and are not intentionally added to the referenced product. Trace amount however may be present.

Product information

Solvent or thinner	Micromax™ 9450	
Solid content	89.4 - 91.4[1]	%

[1]: 750 °C

Rheological properties

Viscosity	1500 - 2800[2]	Pa.s

[2]: Brookfield HBT, UC&SP, 1 rpm, 25 °C

Application technique

Drying time	5	min
Drying temperature	120	°C
Theoretical coverage	0.16	cm^2/g

Electrical properties

Surface resistivity	≤3	mOhm per square

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Storage and stability

Shelf life	6[3] months

[3]: in unopened containers, from date of shipment, at temperature <25 °C

Additional information

How to use

Design & compatibility

- Design
  - For detailed recommendations on use of Micromax™ GreenTape™ LF95C and conductors such as Micromax™ LF6141, see the Micromax™ GreenTape™ LF95C Product Data Sheet.

Processing

- Printing
  - The composition should be thoroughly mixed before use. This is best achieved by slow, gentle, hand stirring with a clean burr-free spatula (flexible plastic or stainless steel) for 1-2 minutes. Care must be taken to avoid air entrapment.
  - Printing should be performed in a clean and well-ventilated area. Optimum printing characteristics are generally achieved in the room temperature range of 20-23 °C. Viscosity, and therefore printability, of thick film compositions can be affected by ambient temperatures.
  - From vias in unfired Micromax™ GreenTape™ LF95C low temperature co-fired ceramic material system. The preferred method for via filling is use of stencil masks and screen printing methods. A vacuum stone or other support structure that uniformly distributes vacuum to the Micromax™ GreenTape™ LF95C green sheet is recommended.
- Thinning
  - Thinning thick film compositions is not recommended as material is supplied formulated for optimal performance. Improper thinning may affect printing characteristics. Thinner may be added to replenish solvent lost during normal usage but care should be taken to not over-thin.
- Clean-up solvent
  - 1-Propoxy-2-Propanol
- Drying
  - Dry in air in a well-ventilated oven or conveyor dryer for 5 minutes at 120 °C. Do not over-dry.

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- Lamination and firing
  - Laminate multiple sheets of Micromax™ GreenTape™ LF95C onto which Micromax™ LF6141 has been printed according to processing parameters detailed in the Micromax™ GreenTape™ LF95C Product Data Sheet.
  - Consult these documents as well for details of the recommended Micromax™ GreenTape™ LF95C firing profile for belt or box air furnaces.

Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ LF6141 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

Storage and shelf life

Containers should be stored, tightly sealed, in a clean, stable environment at room temperature (<25°C). Shelf life of material in unopened containers is six months from date of shipment. Some settling of solids may occur and compositions should be thoroughly mixed prior to use.

Safety and handling

For safety and handling information pertaining to this product, read Safety Data Sheet (SDS).

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