

# Micromax™ 4933D

## Microcircuit and Component Materials

### 2.9:1 Silver/Palladium (1% Platinum) Termination

Micromax™ 4933D is a cadmium-free\* ternary termination designed to resist leaching during hand soldering and provide excellent contact properties. This termination may be employed on parts where platable terminations are not desired, but which will be subjected to soldering conditions. Micromax™ 4933D is compatible with low, medium and high-fire bodies.

### Product benefits

- Cadmium, Nickel and Phthalate free\*
- Very good solderability
- Excellent cosmetics
- High solder leach resistance

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

### Product information

|                    |                |
|--------------------|----------------|
| Solvent or thinner | Micromax™ 8218 |
| Solid content      | 75 - 77 %      |

### Rheological properties

|           |                             |
|-----------|-----------------------------|
| Viscosity | 26 - 36 <sup>[1]</sup> Pa.s |
|-----------|-----------------------------|

[1]: Brookfield RVT, UC&SP, 10 rpm, 25 °C

### Storage and stability

|            |                         |
|------------|-------------------------|
| Shelf life | 6 <sup>[2]</sup> months |
|------------|-------------------------|

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

### Additional information

How to use

### Processing

- **Application**
  - Palomar-type dipping.
- **Substrate**s
  - Ceramic capacitors bodies.
- **Dipping**
  - Micromax™ 4933D termination 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. Dipping should be carried out in a clean, well-ventilated area.

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- Note : Optimum dipping characteristics of Micromax™ 4933D are generally achieved in the temperature range of 21 °C - 23 °C.
- **Thinning**
  - Micromax™ 4933D is optimized for dipping and thinning is not normally required. Micromax™ 8218 may be used sparingly for slight adjustments to viscosity or to replace evaporation losses. However, the use of too much thinner or the use of a non-recommended thinner may affect the rheological behavior of the material and its dipping characteristics.
- **Drying**
  - 200 °C peak for 15 min. cycle on Palomar belt dryer.
- **Firing**
  - 710-780 °C for 6 minutes at peak, 40 minute cycle.
  - Care must be taken to ensure that any gasses/vapors from other chemicals or materials (e.g. halogenated solvents) do not enter the furnace muffle. It is also essential that the air supply to the furnace is clean, dry and free of contaminants. Micromax™ 4933D termination composition is fired on a 40 minute firing cycle to a peak of 710 °C - 780 °C, held for 6 minutes. Variations in the peak firing temperature and/or time at the peak temperature may result from over-firing. Care must be taken to assess the appropriate firing conditions for a particular body type.

## Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 4933D 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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