

Micromax™ 5477

Electronic Inks and Pastes

Glass Encapsulant

Micromax™ 5477 is a screen printable, laser trimmable, air-fired G1 glass encapsulant for chip resistors.

Product benefits

- Optimized viscosity for higher printing speed
- Acid resistant - withstands acidic nickel plating conditions
- G1 encapsulant for chip resistors
- Green colored, laser trimmable
- Lead, Cadmium, Nickel and Phthalate free*

* Lead, Cadmium, Nickel and Phthalate 'free' as used herein means that lead, cadmium, 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™ 8218
Solid content	63 - 69 %

Rheological properties

Viscosity	120 - 180 ^[1] Pa.s
[1]: Brookfield HBT, SC4-14/6R, 10 rpm, 25 °C	

Application technique

Mask mesh	200 - 325 ^[2]
Drying time	10 min
Drying temperature	150 °C
Recommended film thickness, dried	16 - 18 ^[3] µm
Recommended film thickness, fired	8 - 9 ^[3] µm
Leveling time	5 - 10 min

[2]: Screen Types: Stainless steel

[3]: 250-mesh stainless steel screen

Storage and stability

Shelf life	6 ^[4] months
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[4]: in unopened containers, from date of shipment, at temperature <25 °C

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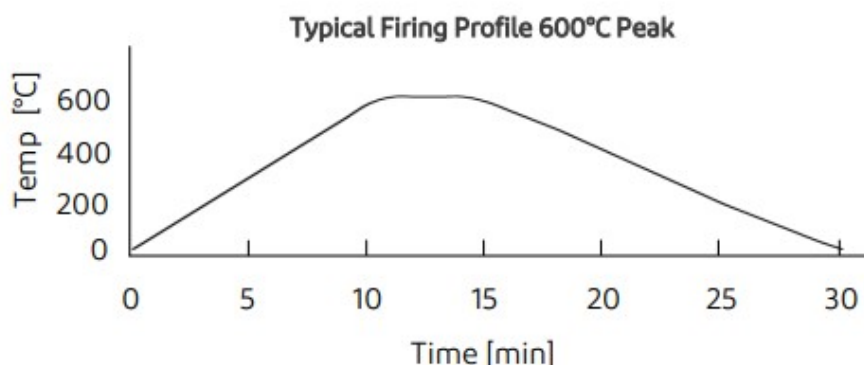
Additional information

How to use

Processing

- **Screen types**
 - 200 - 325 wire/inch stainless steel mesh
 - 77 - 120 thread/cm polyester mesh
- **Printing**
 - Print to a dried thickness of 16-18µm with a 250-mesh stainless steel screen to give a fired thickness of 8-9µm. Encapsulant composition Micromax™ 5477 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 bubble entrapment.
- **Drying**
 - Prints should be allowed to level at room temperature for 5-10 minutes and then dried for 10 minutes at 150°C.
- **Firing**
 - Dried prints should be fired in a belt furnace. Use a 30-minute cycle with a peak temperature of 600-620°C for 5-10 min.

Chart 1 – Firing Profile



Properties

- Information in this datasheet shows anticipated typical physical properties for Micromax™ 5477 based on specific controlled experiments in our labs and are not intended to represent the product specifications, details of which are available upon request.

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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).

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

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