

Mountain Ridge Business Park, Unit B12 1248 Sussex Turnpike, Randolph, New Jersey 07869-2908 Phone: 973.895-3600 Fax: 973.895-3617 www.koartan.com sales@koartan.com

REV. 111712F

Technical Information

5635 Low Temperature Glass Paste

The 5635 glass paste was designed for applications requiring very low processing temperature. It can be used as an overglaze or sealing glass paste. Its key features include:

- RoHS Compliant
- Cadmium Free
- Nearly Hermetic
- Compatibility with Most Substrates

TYPICAL FIRED FILM CHARACTERISTICS

Paste Color White

Firing Temperature 350°C, 30 minutes

Surface Finish Shinny

Fired Film Color Translucent Gray

COMPOSITION PROPERTIES

Viscosity: 130 ± 30 Kcps, when measured with Brookfield HBT viscometer, Spindle #14, utility cup, 10 rpm, 25 °C

Specific Gravity: 2.0 - 2.6 g/cm³

Recommended Thinner: KOARTAN A-1039

RECOMMENDED PROCESSING PROCEDURE

Printing: Printing with 250 mesh stainless steel screen using 10-15 micron emulsion and 45 degree angle is recommended. Other mesh counts, 200-325, and emulsion thicknesses, 5-25 microns, may be used for special applications.

Coverage is approximately 120 cm²/g per layer, when utilizing 250 mesh screen and a wet print thickness of about 35 microns.

Drying: Wet prints should be allowed to level for 5-10 minutes prior to drying. Dry for 10-15 minutes in a convection oven or belt dryer at 125 °C-150 °C.

Firing: Firing in air using a belt furnace and a 60 minute profile, with 30 minutes at a peak temperature of 350°C is recommended. Air flow rates must be optimized to ensure that the products of binder burn-off discharge properly and create a fully oxidizing atmosphere in the muffle. Ventilated box furnaces may also be used.

Application Notes: For screen printed films a firing cycle as indicated above provides a shinny and nearly hermetic glass layer. For thicker deposits a slower ramp up and higher firing temperature may be required.

The coefficient of thermal expansion of this glass is high. However, due to low firing temperature, sufficient thermal stress may

not be generated during cooling to cause micro-cracking on low expansion substrates. It is important to conduct thermal cycling experiments on the finished circuit to insure long term reliability.

Storage and Shelf Life: Store in tightly capped containers at room temperature. Shelf life is 6 months for unopened jars. Thorough mixing of the paste before each use is recommended. Under ordinary conditions of storage and use the product should not require thinning. However, solvent loss during extended printing runs may be replaced by incorporating up to 0.5% of Koartan A-1039 thinner.

The information presented herein is based on data believed to be dependable and is accurate and reliable to the best of our knowledge and belief, but not guaranteed to be so. Koartan Company assumes no liability arising from the use of this product or the information provided herein. It is the responsibility of the user to verify the information and to establish the suitability of the product(s) for any particular application. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation.