DIELECTRIC COMPOSITION

Low Temperature Firing Sealing Glass for Soda-Lime Glass

ESL 4022-F is a glass paste in screen-printable form, for use in sealing together soda-lime glass plates. It is designed to be processed at low temperatures. Other glass substrates or ceramics having a thermal coefficient of expansion similar to soda-lime glass may also be bonded. ESL 4022-F has a fine particle size distribution and is useful for making thin seal cross-sections. When properly fired, 4022-F produces fairly clear transparent seals for use in a variety of packaging and hermetic seal applications.

PASTE DATA

RHEOLOGY: Thixotropic, screen printable paste

VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C± 0.5°C) 125±25 Pa·s

COLOR: Transparent Gray

SHELF LIFE: Six months

PROCESSING

SCREEN MESH/EMULSION 200-325/38 μm

LEVELING TIME: 5-10 minutes

DRYING AT 125°C: 10-15 minutes

FIRING TEMPERATURE: 500°C

RATE OF ASCENT/DESCENT: 20°C-40°C/minute

SUBSTRATE FOR CALIBRATION: soda-lime glass

THINNER: ESL 401
**TYPICAL PROPERTIES**

**FIRED THICKNESS:**  $18 \pm 8 \text{ mm}$

**Typical Burnoff And Sintering Cycle**

![Graph of typical burnoff and sintering cycle]

**Typical Sealing Cycle**

![Graph of typical sealing cycle]

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**CAUTION:** Proper industrial safety precautions should be exercised in using these products. Use with adequate ventilation. Avoid prolonged contact with skin or inhalation of any vapors emitted during use or heating of these compositions. The use of safety eye goggles, gloves or hand protection creams is recommended. Wash hands or skin thoroughly with soap and water after using these products. Do not eat or smoke in areas where these materials are used. Refer to appropriate MSDS sheet.

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