



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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DIELECTRIC COMPOSITION

4031

RoHS Compliant* • Sealing glass

ESL 4031 glass paste is designed for sealing ceramic (alumina) plates at a low temperature. When properly fired, ESL 4031 produces transparent seals that can be used in a variety of packaging and hermetic sealing applications.

PASTE DATA

Rheology:	Thixotropic, screen-printable paste
Viscosity: (Brookfield RVT, 10 rpm, ABZ spindle, 25.5 ± 0.5 °C)	225 ± 25 Pa.s
Colour:	Blue
Shelf Life (20 - 25 °C):	6 months

PROCESSING

Screen Mesh, Emulsion:	200 S/S, 18-38 µm
Levelling Time (at 20°C):	5 - 10 min
Drying Time (at 125°C): (depending on substrate volume)	10 - 15 min
Firing Temperature Range:	
Burn-off Cycle (30 min):	375 - 400 °C, Rate 40°C / min
Sintering Cycle (30 min):	450 - 550 °C, Rate 40°C / min
Sealing Cycle (30 min):	530 - 580 °C, Rate 20°C / min
Substrate for Calibration:	96% alumina
Thinner:	ESL 401

ESL Europe (KOP) 4031 0802-New

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See Caution and Disclaimer on page 2.

TYPICAL PROPERTIES

Fired Thickness:

30 - 40 μm

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*None of the six substances referred to in the RoHS Directive (2002/95/EC) are used in the formulation of this product.

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 vapours 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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