ELECTROLYTE TAPE  

**42401**

High Temperature 8 mol% YSZ Tape for use in SOFC and other Fuel Cells

The ESL42401 is an 8 mol% yttria stabilized zirconia (YSZ) ceramic layer prepared by casting on a polyester carrier film, which is coated with a release agent.

Typical applications for this tape are composite fabrication of SOFC and other fuel cells. The electrolyte is designed to be an excellent ionic conductor and poor electronic conductor at operating temperatures. This tape may be used as an electrolyte or a support in SOFC fuel cells.

**STABILIZING AGENT:** 8 mol% Y₂O₃  
**GREEN TAPE THICKNESS:** 125µm ±10%  
**GREEN TAPE COLOR:** off-white  
**LAMINATING:** 21 MPa @ 70°C  
**TYPICAL SINTERING CYCLE:** 0.7°C/minute to 650°C  
2.5°C/minute to 1450-1550°C  
2 hour soak at peak temperature  
**FIRED SHRINKAGE:** X,Y: 18-26 %  
Z: 18-22 %  
**FIRED DENSITY:** (1450°C for 30 minutes) > 98% of theoretical
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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