PROTECTIVE POLYMER COATING

243 White

RoHS Compliant*

ESL 243 White is a screen-printable, thermo-setting, epoxy coating that is resistant to solvent attack when fully cured. This coating is used to insulate all aluminium alloys used in LED applications. It has a high breakdown voltage at low thickness and is especially suited to bulky heat sinks with high thermal mass.

ESL 1906 solderable silver polymer is used as the conductor to form circuitry printed directly onto the aluminium substrate. It can also be used as thermal vias to enable efficient heat dissipation from high intensity LEDs with power ratings up to 3W.

The 243 White may be used as a reflective coating and as a protective coating for thick film circuits on alumina or porcelain enamelled steel.

PASTE DATA

Rheology: Thixotropic, screen-printable paste

Viscosity:
(Brookfield RVT, 10 rpm No. 7 spindle, 25.5 ± 0.5 °C) 80 ± 20 Pa.s

Shelf Life (20 - 25 °C): 6 months

Colour: White

PROCESSING

Screen Mesh, Emulsion: 200 S/S, 25 µm

Levelling Time (20 °C): 5 - 10 min

Drying Time (at 125 °C): 10 - 15 min

Screen Cleaning: ESL 402 Thinner followed by acetone

Curing Schedule: 150°C / 5 - 15 min

Substrate for Calibration: 96% alumina

Thinner: ESL 402
**TYPICAL PROPERTIES**

Cured Thickness: (1 layer measured on 96% alumina) 10 - 15 µm

Approximate Coverage: 120 cm² / g

Service Temperature: -100 to +150 °C

Solvent Resistance: Good resistance to acetone when fully cured

Acid Resistance: <1% weight loss in 5% H₂SO₄ at room temperature

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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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