



## ESL ELECTROSCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

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# CERMET SILVER/PALADIUM CONDUCTOR

# 9633-I

## For use on AlN Substrates

ESL 9633-I is a high performance conductor specially formulated for use on aluminium nitride substrates. It exhibits good adhesion, very good solderability, leach resistance, and silver migration resistance.

### PASTE DATA

<b>Rheology:</b>	Thixotropic screen-printable paste
<b>Viscosity:</b> (Brookfield RVT, 10rpm, ABZ Spindle, 25.5 ± 0.5 °C)	275 ± 25 Pa.s
<b>Bonding Mechanism:</b>	Mixed
<b>Shelf Life (20 - 25 °C):</b>	6 months

### PROCESSING

<b>Screen Mesh, Emulsion:</b>	325 S/S, 25 µm
<b>Levelling Time (at 20 °C):</b>	5 - 10 min
<b>Drying Time (at 125 °C):</b>	10 - 15 min
<b>Firing Temperature Range:</b>	850 - 930 °C
	Optimum: 850 °C
	Time at peak: 10 - 12 min
<b>Rate of Ascent/Descent:</b>	60 - 100°C / min
<b>Substrate for Calibration:</b>	aluminium nitride
<b>Thinner:</b>	ESL 401

ESL Europe (KOP) 9633-I 0305-New

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## TYPICAL PROPERTIES

<b>Fired Thickness:</b> (2 mm x 2 mm pad)	10 - 15 $\mu\text{m}$
<b>Approximate Coverage:</b>	75 - 100 $\text{cm}^2/\text{g}$
<b>Resistivity:</b> (at 12.5 $\mu\text{m}$ fired thickness)	40 - 50 $\text{m}\Omega/\text{sq.}$
<b>Printing Resolution:</b> (line/space)	0.250 mm / 0.250 mm
<b>Solder Wettability:</b> (RMA Flux, 5 sec. dip 62Sn/36Pb/2Ag, 220°C)	Very good
<b>Solder Leach:</b> (No. of 10 sec. dips to double lowest resistance of 100 mm x 0.25 mm conductor, 62Sn/36Pb/2Ag, 220°C)	> 8 dips
<b>Adhesion:</b> (90° pull, 2 mm x 2 mm pads, 62Sn/36Pb/2Ag, 220°C)	
	Initial pull strength: > 7.5 kg

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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 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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