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# CERMET GOLD CONDUCTOR 8844-K

**RoHS Compliant***

ESL 8844-K is an economical, general-purpose gold conductor for use on alumina and over 4913-G dielectric. It has been specifically designed to give thin, smooth and extremely dense films (7 - 9 µm fired thickness). Excellent results are obtained with both ultrasonic aluminium and thermosonic gold wire bonding.

## PASTE DATA

| | |
|---|---|
| **Rheology:** | Thixotropic, screen-printable paste |
| **Viscosity:** (Brookfield RVT, 10rpm, ABZ spindle, 25.5 ± 0.5 °C) | 350 ± 25 Pa.s |
| **Bonding Mechanism:** | Mixed-bonded |
| **Shelf Life (20 - 25 °C):** | 6 months |

## PROCESSING

| | | |
|---|---|---|
| **Screen Mesh, Emulsion:** | | 325 S/S, 20 µm |
| **Levelling Time (at 20°C):** | | 5 - 10 min |
| **Drying Time (at 125°C):** | | 10 -15 min |
| **Firing Temperature Range:** | | 850 - 1000°C in air |
| | Optimum: | 850 °C |
| | Time at peak: | 10 min |
| **Total Firing Cycle:** | | 30 min |
| **Substrate for Calibration:** | | 96% alumina |
| **Thinner:** | | ESL 401 |



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## TYPICAL PROPERTIES

| | | |
|---|---|---|
| **Fired Thickness:**<br>(measured on a 2 mm x 2 mm pad on 96% alumina) | | 7 - 9 µm |
| **Approximate Coverage:** | | 80 - 85 cm²/g |
| **Resistivity:**<br>(measured on a 100 mm x 0.25 mm<br>conductor track at 8 µm fired thickness) | | < 6.0 mΩ/□ |
| **Printing Resolution:**<br>(line/space) | | 0.075 mm / 0.075 mm |
| **Adhesion:**<br>(90° pull, 2 mm x 2 mm pads,<br>80Au/20Sn and 62Sn/36Pb/2Ag) | Initial pull strength:<br>Aged 48 hours at 150°C: | > 6.0 kg<br>> 4.0 kg |
| **Ultrasonic Al Wire Bond:**<br>(25 µm wire; bond length 1 mm;<br>100% wire breaks) | | > 8 g |
| **Aged Al Wire Bond:**<br>(48 hours at 150°C) | | > 6 g |
| **Thermosonic Au Wire Bond:**<br>(25 µm wire; bond length 1 mm;<br>100% wire breaks) | | > 8 g |
| **Aged Au Wire Bond:**<br>(24 hours at 200°C) | | > 7 g |



***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.