



## ESL ELECTROSCIENCE

CERAMIC TAPES &  
THICK-FILM MATERIALS

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## POLYMER RESISTOR SERIES

## RS12100

### Economical Resistors for Electronic Applications • RoHS Compliant\*

ESL RS12100 Series polymer resistors are screen-printable, carbon composition, resistive coatings that offer an economical approach for the production of stable resistors in consumer electronic applications. They are designed for use on FR-4, Kapton®, ceramic or other suitable substrates and can be cured in a well-ventilated box oven.

### PASTE DATA

<b>Rheology:</b>	Thixotropic, screen-printable paste
<b>Viscosity:</b> (Brookfield RVT, 10rpm, No. 7 Spindle, 25.5 ± 0.5 °C)	80 ± 20 Pa.s
<b>Colour:</b>	Black
<b>Shelf Life (20 - 25 °C):</b>	6 months

### PROCESSING

<b>Screen Mesh, Emulsion:</b>	200 S/S, 12 µm
<b>Drying Time (at 125°C):</b>	10 - 15 min
<b>Curing Conditions:</b>	Box Oven: 150°C in a well-ventilated oven for 2 hours
<b>Cured Film Thickness:</b>	18 ± 2 µm
<b>Substrate for Calibration:</b>	FR-4
<b>Termination Conductor:</b>	ESL 1109-S
<b>Thinner:</b>	ESL 402

**NOTE:** Depending on the substrate used, RS 12100 Series materials may be cured at higher temperatures or longer times such as 200°C for two hours. This will improve rotational life in potentiometer applications and stability at elevated temperatures or on exposure to humidity. In order to achieve the best stability, the curing temperature should be approximately 100°C higher than the operational temperature.

ESL Europe RS12100 0909-D

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See Caution and Disclaimer on other side.

TYPICAL RESISTOR PROPERTIES					
	RS 12112	RS 12113	RS 12114	RS 12115	RS 12116
Resistance	100 $\Omega$ /sq	1 k $\Omega$ /sq	10 k $\Omega$ /sq	100 k $\Omega$ /sq	1 M $\Omega$ /sq
Resistance Tolerance	$\pm 25\%$	$\pm 25\%$	$\pm 25\%$	$\pm 25\%$	$\pm 25\%$

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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.

**DISCLAIMER:** The product information and recommendations contained herein are based on data obtained by tests we believe to be accurate, but the accuracy and completeness thereof is not guaranteed. No warranty is expressed or implied regarding the accuracy of these data, the results obtained from the use hereof, or that any such use will not infringe any patent. ElectroScience assumes no liability for any injury, loss, or damage, direct or consequential, arising out of its use by others. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular use, before using it. User assumes all risk and liability whatsoever in connection with his intended use. ElectroScience's only obligation shall be to replace such quantity of the product proved defective.