



# Electro-Science Laboratories, Inc.

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## CERMET NICKEL CONDUCTOR

**2554-N-1**  
**2554-N-3**

### Air firing Nickel Conductor

ESL 2554-N-1 and 2554-N3 are air-firing nickel conductors designed for use as a cathode in D.C. gas discharge displays. The nickel pastes have a firing range of 580°C to 625°C with a time at peak temperature of 10 minutes or longer.

#### PASTE DATA

<b>RHEOLOGY:</b>	Thixotropic, screen printable paste	
<b>VISCOSITY:</b> (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	2554-N-1	225-275 Pa•s
	2554-N-3	700-800 Pa•s
<b>SHELF LIFE:</b> (25°C)		6 months

#### PROCESSING

<b>SCREEN MESH/EMULSION:</b>	325/25 µm
<b>LEVELING TIME:</b> (25°C)	5-10 minutes
<b>DRYING AT 125°C:</b>	10-15 minutes
<b>FIRING TEMPERATURE:</b>	580°C-625°C
<b>OPTIMUM:</b>	580°C
<b>TIME AT PEAK:</b>	≥ 10 minutes
<b>FIRING CYCLE:</b>	3 hours
<b>RATE OF ASCENT/DECENT:</b>	60°C-100°C/minute
<b>SUBSTRATE OF CALIBRATION:</b>	soda lime glass
<b>THINNER:</b>	ESL 401

2554-N-1 & N-3 0107-A

#### ESL Affiliates

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See Caution and Disclaimer on other side.

## TYPICAL PROPERTIES

<b>FIRED THICKNESS:</b>		< 40 $\mu\text{m}$
<b>RESISTIVITY:</b> (when normalized @ 25 $\mu\text{m}$ & co-fired with 3 layers of M4023-C)	2554-N-1 2554-N-3	$\leq 60 \text{ m}\Omega/\text{sq.}$ $\leq 60 \text{ m}\Omega/\text{sq.}$
<b>PRINTING RESOLUTION:</b>		250 $\mu\text{m}$ x 250 $\mu\text{m}$
<b>DIELECTRIC COMPATIBILITY:</b>		M4023-B M4023-C M4024-A

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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 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.

**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. Electro-Science 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 their own tests to determine the suitability thereof for their particular use, before using it. User assumes all risk and liability whatsoever in connection with their intended use. Electro-Science's only obligation shall be to replace such quantity of the product proved defective.

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