



ESL ELECTROSCIENCE

CERAMIC TAPES &
THICK-FILM MATERIALS

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ANODE PASTE

4412

Cadmium and Lead-free* for SOFC and other Fuel Cells

ESL 4412 is an anode composition that contains 50/50 ratio of NiO and 8 mol% YSZ. It is a screen-printable or dispensable thick-film paste.

PASTE DATA

RHEOLOGY:	Thixotropic, screen printable paste
VISCOSITY: (Brookfield RVT, ABZ Spindle, 10 rpm, 25.5°C±0.5°C)	250±50 Pa·s
COLOR	Green

PROCESSING

SCREEN PARAMETERS	200 mesh/25.4-38µm emulsion
LEVELING TIME: (25°C)	5-10 minutes
DRYING AT 125°C:	10-15 minutes
SHELF LIFE: (at 25°C)	6 months
THINNER	ESL 401

4412 0607-new

ESL Affiliates

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See Caution and Disclaimer on other side.

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Complies with RoHS, ELV, WEEE and CHIP 3 EC directives.

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.
