



# ELECTON ER 53A

ELECTRICALLY CONDUCTIVE & FLEXIBLE PASTE

- \* **LOW TEMPERATURE CURING**
- \* **HIGH ELECTRICALLY CONDUCTIVE**
- \* **FLEXIBLE AFTER CURING**
- \* **EXCELLENT ADHESION FOR TYPICAL FLEXIBLE SUBSTRATES**

## GENERAL DESCRIPTIONS:

**ELECTON ER 53A** is single component, electrically conductive and silver filled formulation. This is especially prepared for making flexible PC boards by screen printing application. Paste has short time, and relative low temperature curing properties.

**ELECTON ER 53A** has high and stable electrical conductivity. This type is mostly for high-speed technological process.

## SPECIFICATIONS:

Number of components	One
Consistency	Viscous paste
Color	Dark silver
Percentage of silver (inside ready paste)	53 ± 1%
Dry extract	63 ± 1%
Specific gravity	1.4 – 2.0 g/cm <sup>3</sup>
Viscosity	38 000 – 42 000 cps (*) 22 500 – 24 500 cps (**)
Thixotropy index (1/10 rpm)	5.0 – 5.5
Recommended curing schedule with air-circulated oven	110°C – (10 – 30) min. 120°C – (10 – 20) min.
Min. curing conditions	150°C – 5 min. ( <i>post curing recommended</i> )
Curing with IR tunnel oven	10 – 15 min. <i>total time with (120 – 130)°C in peak.</i>
Theoretical coverage	ab. 500 ft <sup>2</sup> /gallon/mil.
Shelf life	6 months (when storage at 10°C – unopened)

(\*) - Brookfield DVII; SSA#14; 5 rpm; 30°C.

(\*\*) - Brookfield DVII; SSA#14; 10 rpm; 30°C.

## **TECHNICAL PROPERTIES (\*):**

Electrical sheet resistivity	0.020 $\Omega$ /sq @ 1 mil. (when cured 110°C - 10 min.) 0.018 $\Omega$ /sq @ 1 mil. (when cured 110°C - 30 min.) 0.012 $\Omega$ /sq @ 1 mil. (when cured 150°C - 30 min.)
Electrical resistivity	(4.5 – 5) x E(-7) $\Omega$ m (4.5-5 E(-5) $\Omega$ cm)
Pencil hardness	4H pencil test.
Flexibility(**)	20 flexes.
Adhesion test (pull test) (***)	pass
Printability	10/20 mils.

(\*) - Typical value for number of tests.

(\*\*) - Flexibility: Number of flexes until resistivity changes to greater than 50% of initial value.

(\*\*\*) - 3M tape SC600.

## **ATTENTION:**

1. Product is ready for use, but should be mixed very thoroughly before use using wood or plastic spatula. Mix smoothly from the bottom of the container. Mix carefully - not to whip air into the product. ***INSURE ELECTON ER 53A IS AT ROOM TEMPERATURE WHEN YOU WILL START WORKING WITH.***
2. Prepare consistency before use according your SPECIFICATION.
3. If you need, use AXMC **TH # 53A** thinner. Thinner will change paste resistivity. Pls, do not exceed 1% of weight. After first tests pls let us know about your viscosity requirements – we will be able to change it for you.
4. Low conductivity and poor adhesion performance are symptomatic that paste is under curing conditions.
5. Refrigeration during storage is very useful. Keep container with lacquer in temp. no less 10° C. Before use, increase paste temperature very slowly. During storage time do not exceed 25° C.
6. Use paste with adequate ventilation.
7. Avoid skin and eye contact. If ingested, consult a physician immediately.
8. Clean by MEK or other suitable solvents. Allow screen to completely dry before using again.

This information is based on data and tests believed to be accurate. **AMEPOX MC** makes no warranties ( expressed or implied ) as to its accuracy and assumes no liability in connection with the use or inability to use this product.

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