

# 142-0501



ELECTRICALLY CONDUCTIVE, SILVER EPOXY

- \* **TWO COMPONENTS 1:1 MIXING RATIO**
- \* **FOR PROFESSIONAL – ELECTRONIC APPLICATIONS**
- \* **POSSIBLE ROOM TEMPERATURE CURING**
- \* **LOW COST**



## GENERAL DESCRIPTIONS:

**142-0501** is two components, 100% solid (thinners free) high viscosity, epoxy base conductive formulation containing the purest silver flakes as possible. This is especially for service and short production series (manual applications).

**142-0501** has soft paste consistency and it has very good adhesion to many different types of materials - especially glass, quartz, semiconductor chips and oxide covered metals. It is design for bonding of metals and electronic devices like resistors, capacitors, transistors, diodes, etc., even on flexible foil base PCB.

## SPECIFICATIONS:

Number of components	Two.
Mixing ratio A : B (by weight)	1 : 1
Consistency after mixing A+B	Viscosity paste, 100% solids.
Viscosity "A" (*)	25 000 - 28 000 mPa s (cps)
Viscosity "B" (*)	120 000 - 140 000 mPa s (cps)
Viscosity "A+B" (*)	28 000 - 30 000 mPa s (cps)
Thixotrophy Index "A+B" (1/10)	4.2 - 5.0
Color	Dark silver.
Percentage of silver	60 ± 1%
Recommended curing schedule	20 C - 24 hours 60 C - 120 min. 80 C - 100 min. 120 C - 30 min. 150 C - 15 min.
Pot life	1.5 hour @ 25 C.
Storage	6 month with closed container @ 25 C.

(\*) Brookfield DVII; SSA#14; 10rpm; 25C

### **PHYSICAL PROPERTIES (\*):**

Specific gravity "A"	2.45 – 2.65 g/ccm
Specific gravity "B"	1.55 – 1.65 g/ccm
Specific gravity "A+B"	1.95 – 2.50 g/ccm
Thermal conductivity	3.0 - 3.5 W/mK
Glass transition temp. ( Tg )	78 C (TMS method).
Hardness (6H pencil)	Passed
Resistivity after curing ( 20 C – 24 h )	0.001– 0.0012 Ωcm
( 60 C – 120 min )	0.0008 – 0.0009 Ωcm
( 150 C – 15 min )	0.00017 – 0.00018 Ωcm
Connection flexibility (**)	Min. Ø = 4 cm diameter – Passed

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

(\*\*) – Test: Min. 10 moves on Ø diameter roller.

### **ATTENTION:**

**142-0501** is supplied as a double component material and is available in a variety of screw-top jar sizes. Minimum quantity is 100 grams.

1. Mix **142-0501** – Part "A" and "B" inside containers separately first very thoroughly before use. After adding hardener – Part "B", mix mixture "A+B" 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 142-0501 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 # 15** 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 **142-0501** is under curing conditions or has been added too much thinner.
5. Refrigeration during shelf time is useful. Keep containers with both parts of silver paste in temp. no less 10 C. Before use, increase paste temperature very slowly.
6. Use silver epoxy paste with adequate ventilation.
7. Avoid skin and eye contact. If ingested, consult a physician immediately.
8. Clean by MEK, alcohol or other suitable solvents.

### **WARNING:**

Be careful on the case contacts with skin. When it occurs, wash immediately with soap and water.