



ECO SOLDER AX 20

POLYMER BASE, SOLDER REPLACEMENT PASTE

- * **ELECTRICALLY CONDUCTIVE**
- * **EPOXY-PHENOLIC HYBRIDE TYPE BINDER**
- * **HARMLESS & SAFE TO USE (NO LEAD; NO CFC; NO VOC)**
- * **USES REGULAR ON LINE EQUIPMENT**
- * **STABLE TECHNOLOGICAL PROPERTIES.**

GENERAL DESCRIPTIONS:

AMEPOX MC product, trade name **ECO-SOLDER™** represents new generation of single component, electrically conductive formulation designed for replacement of traditionally tin-lead solder pastes. Technology with our new **ECO-SOLDER™** materials eliminates all type of solvents used for pre- or post-cleaning, like it is in conventional tin-lead solder technology.

One of the biggest advantages of **ECO-SOLDER™** is, that it contains no lead or any other dangerous ingredients. It may be used with standard dispensing, SMD stenciling (10/20 mil pitches with excellent resolution) or screen printing application. **ECO-SOLDER™** doesn't dry out on open screens or stencils for up to 2 weeks and refrigeration during storage of this material is not necessary.

ECO-SOLDER™ has extremely short curing time (especially with IR heating tunnel) and quite pleasant odor. This is 100% solids formulation without any volatile thinners so, is no fear about safety conditions for work. CFC solvent's attack ozone layer in the stratosphere is widely known. Aqueous cleaning solvents usually contain alcohol such a methanol, ethanol or isopropyl which are VOC (volatile organic compounds). VOC's are photochemically active and cause smog and ozone in the lower atmosphere. The use of **ECO-SOLDER™** requires no fluxes and therefore no solvent cleaning of the PCB is needed.

E-S AX 20 has high and stable electrical conductivity. This type is mostly for high-speed technological process. It doesn't change viscosity even on open area with thin layer.

SPECIFICATIONS:

Number of components	One
Consistency	Medium visc.
Color	Bright silver
Percentage of silver (inside ready paste)	75 ± 1%
Specific gravity	3.5 – 3.7 g/cm ³
Viscosity	650 000 – 750 000 cps (*)
Drying time before curing process	Not necessary
Recommended curing schedule with air-circulated oven (<i>time when adhesive will reach showing temperature</i>)	150°C – (5 - 10) min. 180°C – (3 - 8) min.
Recommended curing schedule with heating tunnel	200°C in peak – 6 min. <i>curing total time inside tunnel</i>
Shelf life	6 months (when storage at 10°C – unopened)

(*) - Brookfield DVII; SSA#14; 1 rpm; 25°C.

TECHNICAL PROPERTIES (*):

Electrical resistivity	$(3.0 - 3.5) \times 10^{-6} \Omega m$
Pencil hardness	9H pencil hardness (one day after curing)
Range of service for continuous temperature	$(-55)^{\circ}C - (+180)^{\circ}C$
Max. operating temperature	200°C for ab 1.5 h.

(*) - Typical value for number of tests.

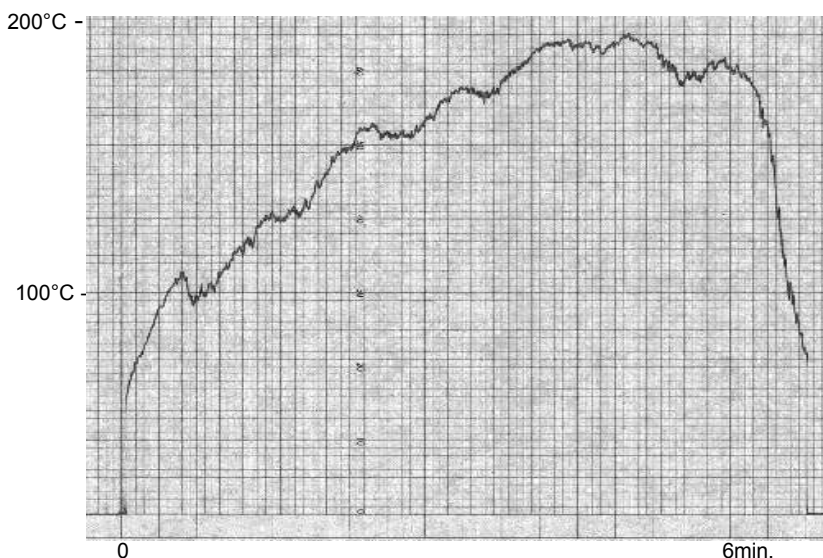


Fig.1. Example of heating tunnel profile for curing E-S AX 20

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 E-S AX 20 IS AT ROOM TEMPERATURE WHEN YOU WILL START WORKING WITH. Refrigeration during shelf time is not necessary.***
2. Prepare consistency before use according your SPECIFICATION.
3. If you need, use AXMC 20 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 shelf time not necessary, but useful. Keep container with lacquer in temp. no less 10 C. Before use, increase paste temperature very slowly.
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.
9. Temperature during printing process must be kept between 20°C and 25°C, with relative humidity (RH) between 40% and 65%. This condition reduces static charges on the substrate.
10. When stored – keep container closed.

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. (es-ax20)