A.20481 X-Ray Shielding Encapsulation Resin Compound for PCB Potting

A two-component encapsulation resin to protect the intellectual property of electrical circuits. After potting the circuit, the mounted components are shielded by the composite from x-ray beams and the design is non-identifiable. Indispensable for protecting any strategic circuit development.
Suggested thickness on both side of the PCBA is at least 2.5 mm over the highest component to reach the required X-Ray shielding result.

1 Physical Properties

Physical Properties	
Base material	Epoxy
Component A Viscosity [mPa·s @25°C]	10000-12000
Component B Viscosity [mPa·s @25°C]	4000 – 8000
Mixed Viscosity [mPa·s @25°C]	7000-10000
Mixed Density [g/cm^3]	2.21
Mixing ratio (Weight)	5:1
Pot life (25°C)	30 mins
Demoulding time (25°C)	8 hours
Cure time (25°C)	72 hours
Storage Temperature between (in dry conditions)	above 15°C, below 35°C
Shelf Life	6 months
Shrinkage	<1%
Dielectric Strength (kV/mm)	>11.5
X-Ray Shielding effectiveness (% of lead metal)	>5 %

2 Physical Properties of the Cured Material

Physical Properties of the Cured Material	
Temperature Range (°C)	-20°C to + 180°C
Colour	Black (UV resistant)
Hardness (25°C)	75D
Volume Resistivity	1014Ω·cm

3 General Characteristic:

- MOQ 1 kg /At higher amount please contact the manufacturer

4 Mixing Procedure:

Component A is packed in a zip bag. Open the bag of Component A and measure the required amount. After removing the required amount close the bag as airtight as possible. Then take Component B and measure 1:5 of mass of Component A. Mix the two components thoroughly till the mix will be homogenous. During mixing care must be taken to avoid the introduction of air to the mixture. Use the mixed epoxy immediate after mixing. After the pot life, the unused mixed material is not usable.
Incomplete mixing or use of the wrong mix ratio can cause partial curing. When storing under (10°C), the hardener may crystallise. If this occurs, simply warm the container gently until all crystals have re-melted (30°C).