

LINQBOND SMA-3603



One-component epoxy SMT Chipbonder

- Medium viscosity (120000–180000 cps) and high thixotropic index
- Low stress, low shrinkage, and low water absorption
- RoHS compliant and halogen-free

LINQBOND SMA-3603 is a solvent-free, one-component epoxy designed for chip bonding applications. With medium viscosity and high thixotropy, it offers excellent control during dispensing and screen printing, minimizing stringing and slumping, particularly at high speeds and small dot sizes. The cured surface is clean and oil-free. **LINQBOND SMA-3603** cures rapidly even at low temperatures, ensuring efficient production cycles.

LINQBOND SMA-3603 offers outstanding physical and electrical properties, including strong adhesion, high electrical insulation, and robust chemical resistance. It ensures reliable performance with different surface mount technology (SMT) applications, demanding electronic device encapsulation and chip bonding.

Uncured properties

Property	Value	Unit
Appearance	Red liquid	–
Viscosity (25 °C, S14, 5 rpm)	150000 ± 60000	cps
Thixotropic index	6–7	–

Recommended curing conditions

Property	Value	Unit
Through Cure Time (by hot plate, 120 °C)	150	sec
Pot life at 25 °C	24	hours

Instructions for Use

1. Before use, allow the product to reach room temperature for 1–2 hours. Do not open the container until the product has reached this temperature.
2. Ensure the surface to be bonded is clean and free of contaminants like dirt, grease, or mold release agents. A simple solvent wipe is often sufficient.
3. Cure time will vary based on for the specific application factors, such as part geometry, materials, bondline thickness, and oven efficiency. Cure schedule should be tested with actual production parts and equipment.
4. For large-scale applications, consider a staged curing process: start with a lower temperature precure, followed by a full cure at a higher temperature to effectively manage heat release.
5. After the heat curing stage, gradually cool the part to minimize thermal stress.

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Cured properties ¹

Property	Value	Unit
Durometer Hardness	87	Shore D
Specific Gravity	1.35	–
Pull Strength of Component (0603+FR4 25 °C)	2.9	kg
Pull Strength of Component (0805, 25 °C)	3.4	kg
Shear Strength (Copper vs Aluminum)	316	kg/cm ²
Thermal Resistance	0.01	m ² K/W
Thermal Conductivity	0.3	W/m · K
Coefficient of Thermal Expansion (CTE) (α1)	55	ppm/°C
Coefficient of Thermal Expansion (CTE) (α2)	206	ppm/°C
Water Absorption Ratio (25 °C /24 h)	0.23	%
Degradation Temperature (TGA 10 °C /min)	361	°C
Glass Transition Temperature	98	°C
Weight Loss Ratio (300 °C)	1.03	%
Surface Resistance	4.5×10 ¹⁴	Ω
Dielectric Constant at 100 kHz	4.1	–
Volume Resistivity	4.5×10 ¹⁵	Ω · cm
Dielectric Strength	22	kV/mm

¹ Specimen Cure Condition: 120 °C/ 10 min

Caution for Use

While long-term, repeated skin contact with this product is not potential for carcinogenicity, it may lead to temporary skin redness. Remove the adhesive with soap and water, and avoid the use of solvents. If swallowed, this product is moderately toxic. Seek immediate medical attention. Avoid eye contact. If eye contact occurs, flush with water for at least 15 minutes and consult a doctor immediately. For detailed safety information, refer to the

Material

Safety

Data

Sheet.

Please note that the provided information is based on available data and typical conditions. For specific applications and detailed test results, refer to the actual test data and conduct appropriate certifications.

Storage and Handling

Store and transport in a cool, dry place at temperatures from –20 to –5 °C. Before use, allow the resin to warm to 14 to 34 °C for 1–2 hours. Prolonged exposure to room temperature can alter the properties. The shelf life when stored from –20 to –5 °C is 183 days (6 months).

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