

LINQBOND™ PM-1221 Series



Two-component Polyurethane Potting Material

- Low-stress potting material
- Excellent vibration and voltage resistance
- Minimal bubble formation during curing

LINQBOND™ PM-1221 is a two-component polyurethane potting material series engineered for low-stress applications. It offers excellent insulating properties and exceptional high-temperature, vibration, and voltage resistance. With its excellent fluidity during application and bubble-free formation upon curing, PM-1221 offers efficiency of the manufacturing process and product reliability.

LINQBOND™ PM-1221 is the ideal choice for casting bonding, and sealing electronic components operating in challenging environments such as high pressure, high frequency, humidity, and heat. It is perfectly suited for precision arresters, various transformers, filters, control boards, and igniters. PM-1221 properties including hardness and viscosity can be customized according to customer requirements. Color available is limited as tabulated.

Property	Unit	STD	Type E	Type M	Type S	Type F
Premixed properties						
Part A Appearance	-	Transparent, White, Gray, Black Liquid				
Part B Appearance	-	Light Yellowish Liquid				
Part A Viscosity at 25 °C	cP	6,000–9,000				20,000
Part B Viscosity at 25 °C	cP	300–400				400
Mixed properties						
Mixed Viscosity	cP	3,000–5,000				10,000–15,000
Mixing ratio by weight	-	5:1				
Pot life	min	≤45	≤30	≤60	≤60	≤30
Initial Curing Time at 25°C	hours	5–7	3–5	8–10	8–10	3–5
Full Curing Time at 25°C	hours	36	24	48	48	24
Full Curing Time at 80°C	hours	6	4	8	8	4
Cured properties						
Shore Hardness	-	70–90 Shore A	≥80 Shore D	50-70 Shore A	30-50 Shore A	≥80 Shore D
Shear Strength	MPa	≥2.3	≥3.5	≥1.5	≥0.8	≥4.8
Specific Gravity	-	1.5–1.7				
Linear Shrinkage Rate	%	0.3				
Operating Temperature	°C	-60 to 150				
Thermal Conductivity	W/m·K	≥0.6				
Dielectric Strength	kV/mm	≥25				
Volume Resistance	Ω·cm	1.0E15				
Flammability	UL94	V-0				

Europe

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Processing Instructions

1. Mix component A and B according to specified ratio. Stir thoroughly to ensure uniformity while preventing air to be introduced into the mixture.
2. Degas the mixture to remove the bubbles for about 5 minutes. Do not fill the container more than half full to prevent overflowing during degassing.
3. Gradually pour the mixed compound into the device being potted. If the ambient temperature is around 5 °C, preheat components A and B to around 15 °C.
4. Allow the potted workpiece cure at room temperature until the surface is dry. Full curing typically occurs within 36 hours. The curing process is influenced by temperature variations; generally, higher temperatures result in faster curing, while lower temperatures lead to slower curing.

Precautions

1. Use the mixture promptly after combining components A and B to prevent a significant increase in viscosity.
2. If the components have been stored for an extended period and exhibit precipitation or stratification, they should be thoroughly mixed before use. Component B is prone to crystallization at low temperatures; therefore, it should be stored in a warmer environment to melt prior to use, ensuring product performance remains unaffected.

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 in a ventilated, dry, and clean environment below 25 °C and 50% RH. Keep away from fire and heat sources. It is strictly forbidden to store in outdoor environments. At proper storage conditions, Part A and Part B has a shelf life of 6 months. Shelf life can be extended by using cold storage.

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