

Polymer Composites Incorporated

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MAX DAIMOND CLEAR EPOXY COLOR STABLE EPOXY RESIN SYSTEM

Technical Bulletin

DESCRIPTION

MAX DIAMOND CLEAR A/B epoxy system is a crystal clear cycloaliphatic based epoxy resin system that demonstrates none yellowing performance suitable for direct sunlight and outdoor exposure. It is unaffected by ultraviolet radiation from direct sunlight or any artificial source of UV energy.

MAX DIAMOND CLEAR A/B is a premium resin system for applications where none yellowing performance and absolute transparency is required.

An epoxy based pigment paste and tinting colorants can be added at varying ratio to achieve a clear tinted, translucent, and opaque colored resin system suitable for finish coating and casting applications.

MAX DIAMOND CLEAR A/B can be used as a protective and decorative coating for wood, metals and other substrates with excellent adhesion, gloss, chemical resistance, toughness and none-yellowing performance.

PHYSICAL PROPERTIES

Density	1.09
Form	Clear Liquid (Mixed)
Gardner Color Scale	0
Viscosity	1,700 cPs At 77°F (25°C) Mixed
Mix Ratio	2:1 Mix Ratio -100 Parts Resin to 50 Parts Curing Agent
Working Time	1.5 hours 200 Gram Mass
Peak Exotherm	195°F at 90 minutes 200 Gram Mass
Full-Cure Time	48 to 96 Hours Minimum At 77°F (25°C)
Accelerated Cure Time	4 Hours At 77°F plus 2 Hours At 175°F

MECHANICAL PROPERTIES

Hardness	ASTM D2440	75 ± 5 Shore D At 25°C
Tee-Peel Adhesion	ASTM D1876	4 Pounds Per Inch Width
Tensile Strength	ASTM D3039	6870 PSI At 77°F (25°C)
Tensile Shear Strength -Aluminum Over Lap	ASTM D2538	1200 PSI At 77°F (25°C)
Elongation	ASTM D638	5% At 77°F (25°C)
Compressive Strength	ASTM D695	8200 PSI At 77°F (25°C)
Cured Gloss 60°	ASTM D2457	92
Impact Resistance	ASTM D5420	Pass - no damage

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General Mixing Technique

1. Warm the PART A component to 30 +/-3 degrees Celsius. MAX DIAMOND CLEAR will cure at a lower temperature, however, it will take longer to gel and up to 4 days to when mixing at a lower temperature
2. Weigh out two parts "Part A" to one part "Part B" by weight or by volume (2:1 Mix Ratio) in to a clean container.
3. Mix using a spatula or a low speed mixer to avoid excess air entrapment mix gently and scrape the sides and bottom of the container to insure complete mixing. Transfer into another clean container and continue to mix for another minute, Dispense from the second mix container only.
4. Pour the mixture into the prepared mold or cavity that needs to filled
5. Allow to cure for 24 to 36 hours at 30°C for 28 to 24 hours.

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