

Polymer Composites Incorporated

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Technical Data Sheet MAX 5MIN A/B Epoxy System

[MAX 5MIN A/B](#) is a two-component epoxy based resin system designed to provide a very broad range of mechanical and physical properties that is suitable for almost all types of epoxy resin applications. It can be utilized as a structural adhesive demonstrating excellent adhesion to wide selection of substrates, chemical resistant or protective coating, impregnating and laminating for composite applications, potting applications for electronics and as a casting resin for large and small applications.

MAX 5MIN A/B is mixed equal parts by volume or weight. MAX 5MIN A/B has a fast set up time even in thin film applications making it an excellent choice for fast filed repairs for fast development of mechanical properties and handling strengths.

Compared to other systems MAX 5MIN A/B offers one of the shortest thin film set time and tack free time allowing faster processing while maintaining durability and high physical impact properties without excessive brittleness typically associated with fast reacting systems.

It performs well as an adhesive for metals, alloys, plastic, wood, stones products, fiberglass, carbon fiber composites and concrete and other substrates. Higher adhesion performance can be achieved after a post cure cycle of 1 hour at 120°C.

MAX 5MIN A/B will bond to metals, alloys, plastic, wood, stones products, fiberglass, carbon fiber composites and concrete and other substrates Higher coating performance can be achieved after a post cure cycle of 1 hour at 120°C.

Pre-Mix and Mixing Notes

Prepare all needed materials before mixing the resin and curing agent together. Pour the desired amount of resin then the curing agent in a clean container and gently mix with a spatula or mixing blade until uniform blend is achieved. Scrape the sides and bottom of the container to insure a thorough mix. Apply the mixed resin directly unto the prepare surface and allow to cure for at least 24 to 36 hours. The mixed resin will set-up to a hard polymer in less than 2 hours and can be handled in 3 to 4 hours.

Shorter working times may be experienced when mixing the material above 80°F.

DO NOT MIX IN A LARGE VOLUME (Greater than 8 Ounces) AND ALLOW IT TO SIT IN A CONFINED MASS. THE MIXED MATERIAL WILL GENERATE HIGH EXOTHERMIC TEMPERATURES IN EXCESS OF 300°F AND WILL CAUSE FUMES AND MAY CAUSE SEVER BURNS. DOUSE THE CONTAINER WITH WATER IF UNCONTROLABLE REACTION OCCURS.

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Physical Properties

Viscosity	18570- 21,000 cPs Mixed
Mix Ratio	100 parts A to 100 parts B by weight or volume
Working Time @ 22°C Start Temperature	5 To 7 Minutes at 100 Gram Mass
Peak Exotherm	196°C
Time To Reach Peak	15 Minutes
Density	1.10 g/cc Cured
Full Cure Time	1 to 3 days at 25°C
Heat Cure	2 Hours @ 25°C Plus 1 Hour @ 120°C
Set-To-Dry @ 10 Mil Film	5 minutes
Surface Dry	7 minutes
Handling Time	3 to 4 Hours

Mechanical Properties

Test Criteria	Room Temp Cure	Room Temp + Heat Cure
Hardness	75 D	80 D
Izod Impact ft-lb/in	.82	1.2
Tensile Shear Strength psi	3,100	3,765
Tensile Strength psi	9,600	12,300
Tensile Modulus psi	400,000	449,120
Tensile Elongation	2.1	1.4
Deflection Temperature	84°C	110°C

PACKAGING AND STORAGE

MAX 5MIN A/B is available in special kit sizes, 5 gallon and 55 gallon Kits. Use size kits and special packaging requests are also available. The use power mixing equipment is recommended to achieve uniform dispersion of filler. MAX 5MIN A/B should be stored in a cool dry place. DO NOT store above 30°C for prolonged period. MAX 5MIN A/B has a 12-month shelf from the date of shipment when store properly.

SAFETY NOTE

This product is for industrial use only. Please review all precautions before using this product. As with all products of the same nature, avoid prolonged inhalation and repeated skin contact. Always wear safety goggles and impervious rubber gloves when handling this material. Large mass curing of this product is not recommended for it may produce noxious fumes.

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IMPORTANT NOTICE

The information contained herein is based on data believed to be accurate at the time of publication. Data and parameters cited have been obtained by PCI using materials under controlled conditions. Data of this type should not be used for specification for fabrication and design. It is the user's responsibility to determine this products fitness for use.

PCI warrants only that this product will only meet the cited parameters within the established conditions. There is no warranty of merchantability, fitness of use, nor any other express implied warranty. The user's exclusive remedy and the manufacturer's liability are limited to refund of the purchase price or replacement of the product within the agreed warranty period.

DO NOT MIX IN A LARGE VOLUME (>8 OUNCE) AND ALLOW IT TO SIT IN A CONFINED MASS. THE MIXED MATERIAL WILL GENERATE HIGH EXOTHERMIC TEMPERATURES IN EXCESS OF 300°F AND WILL CAUSE FUMES AND MAY CAUSE SEVER BURNS. DOUSE THE CONTAINER WITH WATER IF UNCONTROLABLE REACTION OCCURS.

Polymer Composites, Inc. will not be liable for incidental or consequential damages of any kind.

The user should thoroughly test any proposed use of this product and independently conclude satisfactory performance in the application. Likewise, if the manner in which this product is used requires government approval or clearance, the user must obtain said approval.

Determination of the suitability of any kind of information or product for the use contemplated by the user, the manner of use and whether there is any infringement of patent is the sole liability of the user.