SINO POLYMER
华昌聚合物

MERICAN® 3312FR A/B

MERICAN 3312FR A/B is a two-component high-performance epoxy resin system composed of epoxy resin and amine curing agent. It has the advantages of low viscosity and short curing time (<3h). It is especially suitable for making small wind turbine blades and composite products.

FEATURES

- Lower viscosity and fast defoaming
- Fast curing at medium temperature
- Good wet-out to fiberglass
- High heat resistance
- Good process, thermal and mechanical properties

APPLICATIONS

- Suitable for the manufacture of small wind turbine blades
- Suitable for the manufacture of small composite materials molded by infusion process, and can also be used for other products requiring low viscosity and short curing time (<3hr)

TYPICAL PRODUCT VALUES

Property (1)	MERICAN 3312 FRA	MERICAN 3312 FRB
Appearance	Colorless transparent liquid	Colorless transparent liquid
Viscosity, cps (25 °C)	600 - 900	5 - 15
Density, g/cm^3 (25 °C)	1.1 - 1.2	0.94 - 0.95
Amine Value, mg KOH/g	-	620 - 670
Epoxy Equivalent, g/mol	180 - 220	-

PROCESS PARAMETERS

It must be configured accordance with the instructions strictly, reduce or increase the addition of curing agent will not slow down or speed up its reaction. The resin and hardener must be completely mixed.

Property (1)	MERICAN 3312 FR AB
Recommended Mass Ratio	100: 23±2
Mixed Viscosity, cps (25 °C)	160 - 220
Mixed Density, g/cm^3 (25 °C)	1.05 - 1.15
Pot Life, min (25 °C)	60 - 90
Gel Time (2), min (60 °C)	15 - 30
Gel Time (2), min (80 °C)	8 - 12
Gel Time (2), min (100 °C)	4 - 7

Property (1)	MERICAN 3312 FR AB	TM
HDT (1.8 MPa), °C	85 - 95	ASTM D648
Tg, °C	75- 80	ASTM D3418
Solid Density（g/cm^3）	1.13-1.17	ISO 1675
Volume Shrinkage（%）	< 5	ISO 3521
Tensile Strength, MPa	65 - 80	ASTM D638
Tensile Modulus, GPa	2.8 - 3.2	ASTM D638
Elongation at Break, %	6.0 - 9.0	ASTM D638
Flexural Strength, MPa	110 - 130	ASTM D790
Flexural Modulus, GPa	2.8 - 3.2	ASTM D790
Curing Conditions	25 °C / 24 h + 80 °C / 5 h	

(1) Typical values only, should not be considered as product specifications.
(2) Hot plate.

TESTING CONDITIONS

Temperature: 25 °C. Relative moisture: 50 ± 5 %.

PACKING AND STORAGE

Net weight 20 Kg / iron drum, 200 Kg / iron drum, 1000 Kg / IBC tank. The storage container should be well sealed, and the environment should be cool, dry and ventilated due to the hygroscopicity of epoxy resin. The initiator and accelerator must avoid to direct sunlight, the two should be strictly separated and not be stored in the same warehouse or the same carriage for transportation.

MATERIAL SAFETY

A Material Safety Data Sheet of this product is available on request.

TEST METHODS

Test methods (TM) referred to in the table(s) are available on request.

SINO POLYMER is a leading manufacturer of epoxy vinyl ester resin, unsaturated polyester, epoxy resin, polysulphone, coating and adhesives since year 1958, with its headquarter and plant located in Shanghai Chemical Industry Park, P.R. China. The company's Total Quality Management Gene's guaranty sustainable product & service quality, lead time and competitiveness, as the Safety & Security Management, Improvement Process, R&D and International developments make Sino Polymer a sustainable partner on long term.

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