



MERICAN 3421 A/B is a two-component high-performance epoxy resin system composed of epoxy resin and anhydride curing agent, which has the benefits of low viscosity, long pot life, fast curing speed at the proper temperature, excellent mechanical properties and strong fiber adhesion, it is suitable for filament winding process.

## FEATURES

- ◆ Good wet-out to fiber
- ◆ Excellent process, thermal and mechanical properties
- ◆ Long pot life

## APPLICATIONS

Suitable for the manufacture of type IV hydrogen cylinders, pipes, bars, etc.

## TYPICAL PRODUCT VALUES

Property <sup>(1)</sup>	MERICAN 3421 A	MERICAN 3421 B
Appearance	Milky white viscous liquid	Light yellow transparent liquid
Viscosity, cps (25 °C)	6000 - 11000	30 - 100
Density, g/cm <sup>3</sup> (25 °C)	1.1 - 1.3	1.1 - 1.2
Acid Value, mg KOH/g	-	650 - 700
Epoxy Equivalent, g/mol	165 - 200	-
Shelf Life (25 °C)	12 months	12 months

## 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 <sup>(1)</sup>	MERICAN 3421 A/B
Recommended Mass Ratio	100: 100
Mixed Viscosity, cps (25 °C)	200 - 500
Mixed Density, g/cm <sup>3</sup> (25 °C)	1.1 - 1.2
Gel Time <sup>(2)</sup> , sec	660 - 1080@120 °C

Property <sup>(1)</sup>	MERICAN 3421 A/B	TM
Curing Conditions	90 °C / 1 h+110 °C / 2 h	
Tg, °C	125 - 135	ASTM D3418
Tensile Strength, MPa	85 - 95	ASTM D638
Tensile Modulus, GPa	3.2 - 3.5	ASTM D638
Elongation at Break, %	3.0 - 5.0	ASTM D638

# MERICAN® 3421 A/B

Flexural Strength, MPa	135 - 145	ASTM D790
Flexural Modulus, GPa	3.2- 3.5	ASTM D790
Interlayer shear strength, MPa	48.5	ASTM D2344
Interlayer shear strength, MPa (boiled in boiling water for 24h)	45.3	ASTM D2344

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

(2) Hot plate, 0.2 g sample.

## 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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