

Zyvex Performance Materials Aroply™ 250 Nano-Engineered Composite Film Adhesive

Category : Polymer , Thermoset , Carbon Fiber/Thermoset Composite

Material Notes:

Aroply™ 250 Film Adhesive is a versatile, heat curing carbon-nanotube modified epoxy structural film adhesive available in a variety of film weights on a supported knitted nylon carrier. Cured adhesive characteristics are designated by exceptionally high shear and peel strengths on a variety of substrates. This film adhesive is designed for both solid panel and honeycomb constructions. The film adhesive was designed to meet the specifications of MMM-A132B Type I Class 2. Aroply™ contains an optimum level of carbon nanotubes for additional toughness and enhanced mechanical properties. The carbon nanotubes use molecular dispersion technology to ensure enhancements are evenly distributed throughout the adhesive. Features: Wide range of cure properties: 180°F-350°F (82°C-177°C) at vacuum or clamp pressure to >100 psiTacky for adherence to desired locationLong Open Time: 30+ days in standard shop conditionsAdaptable to many processes

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zyvex-Performance-Materials-Aroply-250-Nano-Engineered-Composite-Film-Adhesive.php

Mechanical Properties	Metric	English	Comments
Flexural Strength	46.2 MPa	6700 psi	5 lb Core, 6 hrs @ 220°F, Vacuum Bag
	49.0 MPa	7100 psi	8 lb Core, 6 hrs @ 220°F, Vacuum Bag
Flexural Modulus	6.29 GPa	913 ksi	5 lb Core, 6 hrs @ 220°F, Vacuum Bag
	6.76 GPa	980 ksi	8 lb Core, 6 hrs @ 220°F, Vacuum Bag
Shear Strength	15.13 MPa	2195 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 94; ASTM D1002
	@Temperature 82.2 °C	@Temperature 180 °F	
	17.13 MPa	2485 psi	Cure Cycle, 4 hrs @ 220°F, FPL Acid Etched 6061-T6, Std Dev 132; ASTM D1002
	@Temperature 82.2 °C	@Temperature 180 °F	
	17.33 MPa	2513 psi	Cure Cycle, 8 hrs @ 180°F, FPL Acid Etched 6061-T6, Std Dev 158; ASTM D1002
	@Temperature 82.2 °C	@Temperature 180 °F	
	19.68 MPa	2855 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 64; ASTM D1002
	@Temperature 60.0 °C	@Temperature 140 °F	
	21.59 MPa	3131 psi	Cure Cycle, 4 hrs @ 220°F, FPL Acid Etched 6061-T6, Std Dev 72; ASTM D1002
	@Temperature 60.0 °C	@Temperature 140 °F	
	22.39 MPa	3248 psi	Cure Cycle, 8 hrs @ 180°F, FPL Acid Etched 6061-T6, Std Dev 144; ASTM D1002
	@Temperature 60.0 °C	@Temperature 140 °F	
	22.45 MPa	3256 psi	Cure Cycle, 8 hrs @ 180°F, FPL Acid Etched 6061-T6, Std Dev 502; ASTM

Mechanical Properties	@Temperature 21.1 °C Metric	@Temperature 70.0 °F English	D1002 Comments
	22.5 MPa	3270 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 470; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	23.30 MPa	3379 psi	Cure Cycle, 6 hrs @ 200°F, FPL Acid Etched 6061-T6, Std Dev 100; ASTM D1002
	@Temperature 60.0 °C	@Temperature 140 °F	
	24.1 MPa	3490 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 121; ASTM D1002
	@Temperature 82.2 °C	@Temperature 180 °F	
	24.1 MPa	3500 psi	2 hrs @ 250°F, Metal Clamp Pressure, 6061 T6 FPL Etched
	@Temperature 82.2 °C	@Temperature 180 °F	
	24.29 MPa	3523 psi	Cure Cycle, 1 hr @ 250°F, FPL Acid Etched 6061-T6, Std Dev 456; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	24.51 MPa	3555 psi	Cure Cycle, 6 hrs @ 200°F, FPL Acid Etched 6061-T6, Std Dev 150; ASTM D1002
	@Temperature 82.2 °C	@Temperature 180 °F	
	27.10 MPa	3931 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 138; ASTM D1002
	@Temperature 71.1 °C	@Temperature 160 °F	
	27.6 MPa	4010 psi	Cure Cycle, 6 hrs @ 200°F, FPL Acid Etched 6061-T6, Std Dev 109; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	27.9 MPa	4040 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 117; ASTM D1002
	@Temperature 60.0 °C	@Temperature 140 °F	
	27.97 MPa	4056 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 218; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	28.14 MPa	4082 psi	Cure Cycle, 4 hrs @ 220°F, FPL Acid Etched 6061-T6, Std Dev 128; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	30.74 MPa	4459 psi	Cure Cycle, 6 hrs @ 220°F, FPL Acid Etched 6061-T6, Std Dev 134; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	32.30 MPa	4685 psi	Cure Cycle, 1 hr @ 250°F, FPL Acid Etched 6061-T6, Std Dev 9; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	32.55 MPa	4721 psi	Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 128; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	32.73 MPa	4747 psi	Cure Cycle, 90 min @ 250°F, FPL Acid Etched 6061-T6, Std Dev 84; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	

Mechanical Properties	Metric	English	Comments
	@Temperature 21.1 °C	@Temperature 70.0 °F	6061 T6 FPL Etched
	35.32 MPa	5123 psi	Cure Cycle, 90 min @ 250°F, FPL Acid Etched 6061-T6, Std Dev 96; ASTM D1002
	@Temperature 21.1 °C	@Temperature 70.0 °F	
Peel Strength	5.33 kN/m	30.4 pli	T-Peel, Cure Cycle, 1 hr @ 250°F, FPL Acid Etched 6061-T6, Std Dev 1.6; ASTM D1876
	5.40 kN/m	30.8 pli	T-Peel, Cure Cycle, 6 hrs @ 220°F, FPL Acid Etched 6061-T6, Std Dev 1.9; ASTM D1876
	6.28 kN/m	35.8 pli	T-Peel, Cure Cycle, 90 min @ 250°F, FPL Acid Etched 6061-T6, Std Dev 2.3; ASTM D1876
	6.82 kN/m	38.9 pli	T-Peel, Cure Cycle, 90 min @ 250°F, FPL Acid Etched 6061-T6, Std Dev 3.1; ASTM D1876
	7.10 kN/m	40.5 pli	T-Peel, Cure Cycle, 2 hrs @ 250°F, FPL Acid Etched 6061-T6, Std Dev 3.4; ASTM D1876
	3.51 kN/m	20.0 pli	T-Peel, 2 hrs @ 250°F, Metal Clamp Pressure, 6061 T6 FPL Etched
	@Temperature 82.2 °C	@Temperature 180 °F	
	7.19 kN/m	41.0 pli	T-Peel, 2 hrs @ 250°F, Metal Clamp Pressure, 6061 T6 FPL Etched
	@Temperature 21.1 °C	@Temperature 70.0 °F	

Descriptive Properties	Value	Comments
Drum Peel	19.8 in-lb/in	Tool Side Up, 2 hrs @ 250°F, 30 psi, 6061 T6 Abraded, 1" Nomex 3 lb core 1/8" cell
	20.5 in-lb/in	Tool Side Down, 2 hrs @ 250°F, 30 psi, 6061 T6 Abraded, 1" Nomex 3 lb core 1/8" cell
Load to Failure	606 lbf	5 lb Core, 6 hrs @ 220°F, Vacuum Bag
	669 lbf	8 lb Core, 6 hrs @ 220°F, Vacuum Bag

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China