

ABR ORGANICS LIMITED

(An ISO 9001:2015 Certified Company)

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ABRON - PIR1800 **(Polyimide Resin)**

Introduction:

ABRON PIR1800 is a reactive resin which can be thermally cured to a cross linked polyimide. This resin has been specifically designed for prepregging application and vacuum assisted resin transfer molding (lower viscosity) for structural composite applications where extended high temperature exposures are required. This resin presents a balance of excellent processability and high thermal stability. Excellent strength retention is maintained upto temperatures of ~ 350°C.

Typical Properties of ABRON PIR 1800

<u>Property</u>	<u>Range</u>	<u>Remarks</u>
Appearance	Brown Viscous Liquid	
Odour	Amine Like	
Solubility in Water	Slight	
Specific Gravity	1.0 – 1.2 gm/cc	At 30°C
Viscosity	6000 – 12000 cP	At 30°C
Solid Content	70 – 75 %	140°C – 15 minutes
Actual Solids	57.5 – 62.5 %	250°C – 1 hour
Shelf Life	3 months	At < 4°C

Indicative Properties of Glass Cloth Based Polyimide Laminates

Sl. No	PROPERTIES		ABRON - PIR 1800 POLYIMIDE RESIN COMPOSITE	
			Satin Weave Fabric	Hollow Fibre Fabric
1	Tensile Strength (MPa)	Warp	495	200
		Weft	220	125
2	Compressive Strength (MPa)	Warp	407	220
		Weft	210	132
3	Flexural Strength (MPa)	Warp	400	310
		Weft	265	213
4	Elasticity Modulus in Tension (MPa)	Warp	30,000	26,000
		Weft	13,500	18,100
5	Poisson's Ratio	Warp	0.92	0.139
		Weft	0.06	0.076
		45		0.512

Recommended Storage Conditions :

It is recommended to store the resin at 4°C and used within 3 months of receipt. The resin can be stored for longer durations if stored at sub zero temperatures depending upon the application. Resin should be checked for specifications before usage. The resins have to be brought to room temperature (25°C) before application / usage. The resin should be used within 3 days after attaining room temperature. Uncapping of the resin containers should be done only at room temperatures, as the resin is hygroscopic.

Avoid moisture contamination and contact with iron which will react with the resin. Stainless Steel containers are compatible with the resins.

The product information or recommendations offered, either in writing or verbally, is a part of service information to our customers, and these are based on test results carried out by us based on the current state of our knowledge. Customers are requested to independently evaluate the suitability of the ABROL products for each application. The information provided is for the use by persons having technical skill, at their discretion & risk and no liability can be accepted in respect of information provided and no warranties are intended as the condition of application are beyond our control.