



**Phenocarb® PSR133
Phenolic Resin**

PSR 133 is a phenolic resin that is certified to meet the rigorous requirements of MIL-R-9299C, grade B. PSR133 is unaffected by hydraulic oil, isopropanol, ethylene glycol and hydraulic fluid in 24 hour soak testing per Federal Test Standard 406 – method 7011. PSR133 offers the highest char yield for phenolic today making it suitable for carbon/carbon and ablative applications. PSR133 is commercially available in two solids levels, 62% and 75% respectively.

Properties of PSR133

Solids, %	60 to 64%
Brookfield Viscosity, cps	75 to 300
Solids, %	73 to 77%
Brookfield Viscosity, cps	1800 to 3500
Shelf Life @77°F	4 weeks
Recommended Storage	40°F
Shelf Life @ 40°F	6 months
Char yield, % in carbon/carbon	63 – 67
Carbon Filled Available	Yes
Packaging Options	Drums, Totes, Tankers

**Properties of 7781-PSR133, 7781 E-Glass Fabric
Tested per MIL-R-9299C, Grade B**

	Required Ultimate Strength	Required Modulus	Actual Ultimate Strength	Actual Modulus	Test Status
FLEXURAL, psi					
Standard Cond. (75°F)	73,000	3.5 x 10 ⁶	88,560	4.5 x 10 ⁶	Pass
24 Hr. H ₂ O Boil (75°F)	70,000	3.0 x 10 ⁶	91,440	4.6 x 10 ⁶	Pass
1/2 Hr. @ 160°F	69,000	3.3 x 10 ⁶	81,780	4.1 x 10 ⁶	Pass
1/2 Hr. @ 500°F	52,000	3.1 x 10 ⁶	64,990	3.5 x 10 ⁶	Pass
100 Hrs. @ 500°F	45,000	2.9 x 10 ⁶	52,220	3.3 x 10 ⁶	Pass
TENSILE, psi					
Standard Cond. (75°F)	46,000	N/A	61,260	4.6 x 10 ⁶	Pass
24 Hr. H ₂ O Boil (75°F)	44,000	N/A	58,530	4.5 x 10 ⁶	Pass
1/2 Hr. @ 500°F	39,000	N/A	44,310	N/A	Pass
COMPRESSION, psi					
Standard Cond. (75°F)	58,000	N/A	68,910	3.8 x 10 ⁶	Pass
24 Hr. H ₂ O Boil (75°F)	53,000	N/A	66,450	3.6 x 10 ⁶	Pass
1/2 Hr. @ 500°F	32,000	N/A	47,280	N/A	Pass
HYDRAULIC OIL	Requirement	Actual	Status		
% Weight Change	+/- 0.20 (max)	0.02	Pass		
% Thickness Change	+/- 0.20 (max)	0.00	Pass		
Flexural Strength, psi	70,000	85,660	Pass		
ISOPROPANOL	Requirement	Actual	Status		
% Weight Change	+/- 0.20 (max)	0.01	Pass		
% Thickness Change	+/- 0.20 (max)	0.00	Pass		
Flexural Strength, psi	70,000	89,880	Pass		
ETHYLENE GLYCOL	Requirement	Actual	Status		
% Weight Change	+/- 0.20 (max)	0.00	Pass		
% Thickness Change	+/- 0.20 (max)	0.00	Pass		
Flexural Strength, psi	70,000	81,420	Pass		
HYDAULIC FLUID	Requirement	Actual	Status		
% Weight Change	+/- 0.20 (max)	0.02	Pass		
% Thickness Change	+/- 0.20 (max)	0.00	Pass		
Flexural Strength, psi	70,000	86,540	Pass		

	Requirement	Actual	Status
Barcol Hardness	55	82	Pass
Water Absorption (%)	1.25 (max)	0.21	Pass
Flammability	1.0"/minute (max)	Self Exting.	Pass
Cured Resin Content	None	29.20%	N/A
Specific Gravity	None	2.01	N/A

The data presented has been developed under controlled manufacturing and test conditions and is considered accurate. No warranty is expressed or implied regarding the accuracy of these data or the use of this product. It is the responsibility of the end user to determine suitability for use.

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