



Engineering Thermoset Material

FM 21386

**Description** FM 21386 is a single stage phenolic molding compound reinforced with synthetic fiber in pellet form.

**Available colors** Black

**Available molding grades** Compression, Transfer, Injection

**Form** Pellet

PHENOLIC

Properties <sup>1</sup>		Typical Value	Unit	Method	
Physical	Specific Gravity	1.25	g/cm <sup>3</sup>	ASTM D792	
	Apparent (Powder) density	0.5	g/cm <sup>3</sup>	ASTM D1895	
	Molding shrinkage	1.2	%	ASTM D955	
	Post shrinkage	-	%	ASTM D955	
	Water absorption	24 hour 48 hour	0.15 0.5	% %	ASTM D570 ASTM D570
Thermal	Temperature of deflection under load	As Molded Post Baked	145 -	°C at 1,8 MPa °C at 1,8 MPa	ASTM D648A ASTM D648A
	Thermal Conductivity	-	W/mK	ASTM C518	
	UL Temperature Index	-	°C	UL 746B	
	UL-flammability	3.2 mm	-	-	UL 94
		1,6 mm	-	-	UL 94
	Coefficient of linear thermal expansion	parallel	-	10 E-6/°C	ASTM E831
perpendicular		-	10 E-6/°C	ASTM E831	
Mechanical	Flexural strength	62	MPa	ASTM D790	
	Flexural modulus	5	GPa	ASTM D790	
	Strain to failure in flexure	-	%	ASTM D790	
	Tensile strength	41	MPa	ASTM D638	
	Izod impact strength, notched	32	J/m	ASTM D256A	
	Compressive strength	172	MPa	ASTM D695	
	Rockwell Hardness, E Scale	-		ASTM D785	
Electrical	Dielectric Constant, 1 MHz, wet	4.8		ASTM D150	
	Dissipation Factor, 1 MHz, wet	0.02		ASTM D150	
	Arc Resistance	-	Seconds	ASTM D495	
	Dielectric strength,	ST	13.7	kV/mm	ASTM D149
	60 Hz, wet	SS	11.0	kV/mm	ASTM D149
	Tracking resistance	-	-	V	ASTM D3638 (IEC 112)

<sup>1</sup> Properties measured on compression molded ASTM specimens

<sup>2</sup> Values are typical, not statistical minimums. Contact your Sumitomo Bakelite representative for specifications.

ST = short time. SS = step-by-step. Wet = immersed in H<sub>2</sub>O for 48 hrs. at 50 °C prior to testing.

Certification to ASTM D-5948 requires batch testing. All testing in accordance with ASTM D-5948. ASTM D-5948 supersedes MIL-M-14.

Contact your Sumitomo Bakelite representative for post baking recommendations.

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