

**Amodel® HFFR-4133**

PPA-GF33

Syensqo

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Molding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	12000	MPa	ISO 527
Yield stress	145	MPa	ISO 527
Strain at break	1.9	%	ISO 527
Flexural modulus, 23°C	10800	MPa	ISO 178
Izod impact strength, +23°C	40	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C	7	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Rockwell Hardness	R 121	-	ASTM D 785

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	300	°C	ISO 75-1/-2
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.4	mm	-

Electrical properties	Value	Unit	Test Standard
<b>ASTM Data</b>			
Dielectric Strength, Short Time	30	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.012	-	ASTM D 150
Dielectric Constant, 1 MHz	3.53	-	ASTM D 150
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Density	1460	kg/m <sup>3</sup>	ISO 1183
Water Absorption, 24hr	0.28	%	ASTM D 570

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.06	%	-
Melt temperature	340 - 350	°C	-
Mold temperature	90 - 110	°C	-
Zone 1	300	°C	-
Zone 2	325	°C	-
Injection speed	76 - 102	mm/s	-

**Characteristics****Processing**

Injection Molding

**Delivery form**

Pellets, Black, Natural Color

**Special Characteristics**

Flame retardant, Halogen-free

**Features**

Creep Resistance

**Chemical Resistance**

General Chemical Resistance

**Applications**

Electrical and Electronical

**Regional Availability**

North America, Europe, Asia Pacific