



Gravi-Tech™ GRV-NY-027-SS-BLK-F

Polyamide 6

Key Characteristics

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • North America	• South America
Features	• High Specific Gravity	• Non-Toxic	
Uses	• Appliance Components • Automotive Applications • Consumer Applications • Handles	• Industrial Applications • Knobs • Medical/Healthcare Applications • Metal Replacement	• Sporting Goods • Weighting & Balancing
Agency Ratings	• FDA 21 CFR 177.1500(a)(6)		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	2.70	2.69 g/cm ³	ASTM D792
Molding Shrinkage - Flow	0.0080 to 0.011 in/in	0.80 to 1.1 %	ASTM D955
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus ²	800000 psi	5520 MPa	ASTM D638
Tensile Strength ² (Yield)	9000 psi	62.1 MPa	ASTM D638
Tensile Elongation ² (Break)	3.0 %	3.0 %	ASTM D638
Flexural Modulus ³	650000 psi	4480 MPa	ASTM D790
Flexural Strength ³	14900 psi	103 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	1.0 ft-lb/in	53 J/m	
Unnotched Izod Impact			ASTM D256
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	8.0 ft-lb/in	430 J/m	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Rockwell Hardness (R-Scale, 73°F (23°C))	113	113	ASTM D785
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	370 °F	188 °C	
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	190 °F	87.8 °C	
Vicat Softening Temperature	414 °F	212 °C	ASTM D1525

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	175 °F	79.4 °C

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Injection	Typical Value (English)	Typical Value (SI)
Drying Time	4.0 hr	4.0 hr
Processing (Melt) Temp	520 to 560 °F	271 to 293 °C
Mold Temperature	180 to 275 °F	82.2 to 135 °C

Notes

¹ Typical values are not to be construed as specifications.

² Type I, 0.20 in/min (5.1 mm/min)

³ 0.050 in/min (1.3 mm/min)

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