



# Geon™ Fiberloc™ 83510

## Rigid Polyvinyl Chloride

### Key Characteristics

General	
Material Status	• Commercial: Active
Regional Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight
Features	• High Flow • High Stiffness
Uses	• Electrical Housing • Outdoor Applications
Forms	• Pellets

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.45	1.45	ASTM D792
Spiral Flow	35.0 in	88.9 cm	
Molding Shrinkage - Flow	5.0E-4 to 1.5E-3 in/in	0.050 to 0.15 %	ASTM D955
Outdoor Suitability (All Colors)	f1	f1	UL 746C
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus <sup>2</sup>	700000 psi	4830 MPa	ASTM D638
Tensile Strength <sup>2</sup> (Yield)	8000 psi	55.2 MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break)	4.0 %	4.0 %	ASTM D638
Flexural Modulus	600000 psi	4140 MPa	ASTM D790
Flexural Strength	12000 psi	82.7 MPa	ASTM D790
Poisson's Ratio	0.42	0.42	ASTM E132
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact 73°F (23°C), 0.125 in (3.18 mm), Injection Molded	1.0 ft·lb/in	53 J/m	ASTM D256A
Unnotched Izod Impact <sup>3</sup> 73°F (23°C), 0.125 in (3.18 mm)	7.0 ft·lb/in	370 J/m	ASTM D4812
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore D)	82	82	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Annealed, 0.250 in (6.35 mm)	167 °F	75.0 °C	ASTM D648
CLTE - Flow	2.2E-5 in/in/°F	4.0E-5 cm/cm/°C	ASTM D696
RTI Elec	122 °F	50.0 °C	UL 746
RTI Imp	122 °F	50.0 °C	UL 746
RTI Str	122 °F	50.0 °C	UL 746
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.06 in (1.5 mm), ALL)	• V-0 • 5VA	• V-0 • 5VA	UL 94

**Processing Information**

Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	390 to 410 °F	199 to 210 °C

**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Type I, 0.20 in/min (5.1 mm/min)

<sup>3</sup> Injection Molded

The logo for PolyOne, featuring the word "PolyOne" in a stylized, italicized serif font with a horizontal line underneath.

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