



THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

Homopolymer Polypropylene Semi-Crystalline Commodity Plastic

Homopolymer Polypropylene is a low-cost commercial grade of thermoplastics for non-critical applications. It has a high strength-to-weight ratio and zero moisture absorption. Homopolymer Polypropylene has excellent chemical and corrosion resistance and excels at thermoforming performance. It is FDA, NSF, and SSI Standard 20 compliant. It is common in orthotic and prosthetic devices, mechanical pump components, storage tanks, and valve bodies.

PolyPro FR is The Gund Company's commercial grade of flame-retardant Homopolymer Polypropylene.

The Gund Company custom fabricates insulation materials to the exact specifications and drawings specified by our customers. We offer our customers the proper product for their specific application. A variety of dimensions and diameter sizes are available. Product colors vary according to material type.

		ISO/IEC			ASTM		
PROPERTIES		Test Method	Units	Typical Values	Test Method	Units	Typical Values
PHYSICAL	Density	ISO 1183-1	g/cm ³	0.91			
	Specific Gravity				ASTM D792		0.91
	Water Absorption: 24 hrs. in water at 73°F	ISO 62	%	<0.10	ASTM D570	%	-
	Water Absorption: Saturation in water at 73°F		%	<0.10	ASTM D570	%	-
	Coefficient of Friction: Dynamic	ISO 7148-2		-	QTM 55007		0.25
THERMAL	Melting Temperature: DSC, 10°C(50°F)/min	ISO 11357-1/-3	°C	165	ASTM D3418	°F	327
	Thermal Conductivity at 23°C (73 °F)		W/m·K	0.22		BTU·in/ft ² ·hr·°F	-
	CLTE (-40 to 150°C) (-40 to 300°F)				ASTM E831 (TMA)	μin/in·°F	43
	CLTE (23 to 100°C) (73 to 210°F)		μm/m·°C	150			
	Heat Deflection Temperature (264 PSI)	ISO 75-1/-2	°C	57	ASTM D648	°F	-
	Continuous Service Temperature in Air: 20 hrs.		°C	90		°F	180
	Flammability: UL94 (3 mm (1/8 in.))			HB			HB
MECHANICAL	Ultimate Tensile Strength	ISO 527-1/-2	MPa	34	ASTM D638	PSI	-
	Tensile Strain at Yield	ISO 527-1/-2	%	6	ASTM D638	%	14
	Tensile Strain at Break	ISO 527-1/-2	%	25	ASTM D638	%	400
	Tensile Modulus of Elasticity	ISO 527-1/-2	GPa	1,800	ASTM D638	KSI	190
	Compressive Stress: 1 / 2 / 5 % nominal strain	ISO 604	MPa	15 / 26 / 43			-
	Compressive Strength				ASTM D695	PSI	5,000
	Charpy Impact Strength: Unnotched	ISO 179-1/1eU	kJ/m ²	116			
	Charpy Impact Strength: Double 14° Notched	ISO 21304-2	kJ/m ²	12			
	IZOD Impact Strength: Notched				ASTM D256	ft-lb/in	1.20
	Flexural Strength	ISO 178	MPa	-	ASTM D790	PSI	4,800
ELECTRICAL	Flexural Modulus	ISO 178	GPa	-	ASTM D790	KSI	195
	Shore Hardness: D Scale	ISO 868		78	ASTM D2240		78
	Dielectric Strength	IEC 60243-1	kV/mm	-	ASTM D149	V/mil	570
	Surface Resistivity				ANSI/ESDSTM 11.11	Ohms/sq	10 ¹⁴

The data supplied are typical values. They are not to be considered specification values. All of the information, suggestions, and recommendations about these properties and uses of the products herein are based on tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty - expressed or implied - including, without limitation, warranties of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.