



# THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

## PVC | CPVC | Kydex™ 100

### PVC (Polyvinyl chloride) & CPVC (Chlorinated polyvinyl chloride) & Kydex™ 100 - PVC - High Impact Fire-Rated

PVC is a thermoplastic. The composition is 57% chlorine (derived from industrial-grade salt) and 43% carbon (derived predominantly from oil/gas via ethylene). Chlorine gives PVC excellent fire resistance. 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.

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.

PROPERTIES	ASTM*	Units	TYPICAL VALUES					
			Unfilled	15% Graphite	40% Graphite	10% PTFE 15% Graphite	15% Moly	
<b>PHYSICAL</b>	Water Absorption: 24 hrs. @ 73°F	ASTM D570	%	0.24	0.19	0.14	0.21	0.23
	Water Absorption: 48 hrs. @ 73°F	ASTM D570	%	0.72	0.57	0.42	0.49	0.65
	Water Absorption: Saturation, 50% RH @ 73°F	ASTM D570	%	1.0 - 1.3	0.8 - 1.1			
	Specific Gravity @ 73°F	ASTM D792		1.43	1.51	1.65	1.55	1.60
	Poissons Ratio @ 73°F			0.41	0.41			
<b>THERMAL</b>	CLTE: From 73°F to 500°F	ASTM D696	µin./in.-°F	30.0	27.0	21.0	54.0	52.0
	CLTE: From -80°F to 73°F	ASTM D696	µin./in.-°F	25.0	19.0			
	Thermal Conductivity @ 104°F		W/m/°C	0.35	0.87	1.73	0.76	0.47
	Specific Heat		J/kg/°C					
	Deformation Under 14 MPa Load (122°F)	ASTM D621	%	0.14	0.10	0.08	0.13	0.12
	Heat Deflection Temperature (2 MPa)	ASTM D648	°C	360	360			
Flammability: Oxygen Index	ASTM D2863	%	53	49				
<b>MECHANICAL</b>	Ultimate Tensile Strength @ 73°F / 500°F	ASTM D1708	KSI	12.5 / 6.0	9.5 / 5.5	7.5 / 3.4	6.5 / 3.5	8.5 / --
	Elongation at Break @ 73°F / 500°F	ASTM D1708	%	7.5 / 6.0	4.5 / 3.0	3.0 / 2.0	3.5 / 3.0	4.0 / --
	Flexural Strength @ 73°F / 500°F	ASTM D790	KSI	16.0 / 9.0	16.0 / 9.0	13.0 / 6.5	10.0 / 5.0	11.0 / 5.8
	Flexural Modulus @ 73°F / 500°F	ASTM D790	KSI	450 / 250	550 / 370	700 / 400	450 / 200	475 / 270
	Compressive Stress at 1% Strain, 73°F	ASTM D695	KSI	3.6	4.2	4.6	3.0	5.0
	Compressive Stress at 10% Strain, 73°F	ASTM D695	KSI	19.3	19.3	16.3	14.8	18.5
	Compressive Stress at 0.1% Offset, 73°F	ASTM D695	KSI	7.4	6.6	6.0	5.4	
	Compressive Modulus, 73°F	ASTM D695	KSI	350	420	475	300	350
	Axial Fatigue at 103 cycles 73°F / 500°F		KSI	8.10 / 3.8	6.7 / 3.3			
	Axial Fatigue at 107 cycles 73°F / 500°F		KSI	6.1 / 2.4	4.7 / 2.4			
	Flexural Fatigue at 103 cycles 73°F		KSI	9.5	9.5			
	Flexural Fatigue at 107 cycles 73°F		KSI	6.5	6.5			
	Shear Strength @ 73°F	ASTM D732	KSI	13.0	11.2			
	IZOD Impact Strength Notched, 73°F	ASTM D256	J/m	42.7	42.7			
	IZOD Impact Strength Unnotched, 73°F	ASTM D256	J/m	747	320			
Friction Coefficient: In Vacuum / Static in Air			-- / 0.29	-- / 0.30	-- / 0.27	-- / 0.20	0.03 / --	
Wear (K) Factor		m/s 10-10	17 - 85	6.3	4.2	4.9	17 - 23	
<b>ELECTRICAL</b>	Dielectric Constant at 102 Hz @ 73°F	ASTM D150		3.62	13.53			
	Dielectric Constant at 106 Hz @ 73°F	ASTM D150		3.64	13.28			
	Dielectric Constant at 108 Hz @ 73°F	ASTM D150		3.55	13.41			
	Dissipation Factor at 102 Hz @ 73°F	ASTM D150		0.0018	0.0053			
	Dissipation Factor at 104 Hz @ 73°F	ASTM D150		0.0036	0.0067			
	Dissipation Factor at 106 Hz @ 73°F	ASTM D150		0.0034	0.0106			
	Dielectric Strength Short Time 2 mm Thick @ 73°F	ASTM D149	MV/m	3.2	1.4			
	Volume Resisitivity @ 73°F	ASTM D257	Ohm*m	1014 - 1015	1012 - 1013			
	Surface Resisitivity @ 73°F	ASTM D257	Ohm	1015 - 1016				

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.