

HYDLAR™

KEY FEATURES

- High Strength
- Extremely Wear Resistant
- Increased Surface Temperature Capability
- Highly Resistant to Abrasion
- No Galling of Mating Wear Surfaces
- Good Dimensional Stability
- Outstanding Machinability

DESCRIPTION

HYDLAR™ possesses a combination of physical properties that cannot be found in any other commercially available engineered plastic. Design engineers have created a family of superior wear and abrasion resistant thermoplastics using aramid fiber reinforcement. HYDLAR™ is applicable to a wide variety of industrial applications where high strength, extreme wear resistance and low abrasiveness are required. Typical applications would be wear strips, bearings, bushings, rollers, gears and wherever wear and abrasion resistant materials are required.

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Physical	Chemical Designation			PA 66	
	Filler			Aramid Fibers	
	Density		g/cm ³	1.19	D792
Mechanical	Tensile Modulus	@ 73 °F	PSI	1,300,000	D638
	Tensile Strength @ Yld	@ 73 °F	PSI	16,000	D638
	Tensile Strength @ Brk	@ 73 °F	PSI		
	Shear Strength	@ 73 °F	PSI		
	Elongation @ Yld	@ 73 °F	%		
	Elongation @ Brk	@ 73 °F	%	4	D638
	Flexural Modulus	@ 73 °F	PSI	900,000	D790
	Flexural Strength	@ 73 °F	PSI	23,000	D790
	Compressive Modulus	@ 73 °F	PSI		
	Compressive Strength	@ 73 °F, 10% strain	PSI	16,800	D695
	Izod (charpy) Impact Strength	@ 73 °F	ft-lbs/in	2.7	D256
	Rockwell Hardness	@ 73 °F	M (R) Scale	92	D785
	Coefficient of Friction	Static			
	Coefficient of Friction	Dynamic, 40PSI, 50 FPM			
	Wear (K) Factor		in ³ -min/ft-lbs-hr	79-128	D3702
Limiting PV		psi-fpm	2,500	D3702	

TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
Thermal	Vicat Softening Point		°F		
	Melting Temperature		°F		
	Heat Deflection Temperature	@ 66	°F		
	Heat Deflection Temperature	@ 264	°F	470	D648
	Service Temperature	Intermittent	°F	300	
	Service Temperature	Long Term	°F	200	
	Thermal Expansion (CLTE)		in/in/°F	1.6*10 ⁻⁵	D696
	Specific Heat		BTU/lb-°F		
	Thermal Conductivity		BTU-in/hr-ft ² -°F		
Other	Moisture Absorption	@ 24 hrs, 73 °F	%	0.37	D570
	Moisture Absorption	@ Saturation, 73 °F	%	6.30	D570
	Flammability	UL 94			
	Food Grade			N	
	Relative Cost			\$\$ \$\$	

*The data stated above are typical values intended for reference and comparison purposes only.

*The data should not be used as a basis for design specifications or quality control.

*The information is provided as a guide to the best of our knowledge and given without obligation or liability.

*Testing under individual application circumstances is recommended.