TECAMID™ 66

Polyamide 66

Ensinger Inc.

Message:

Nylon was the first engineering resin. It has been used in applications ranging from electronic, marine, and automotive industries to fibers used to make carpet. Nylon has outstanding wear resistance and low frictional properties. It has very good temperature, chemical, and impact properties. However, nylon's one weakness is a propensity to absorb moisture and thus have poor dimensional stability.
TECAMID® has an excellent balance of properties which make it an ideal material for metal replacement in applications such as automotive parts, industrial valves, railway tie insulators, and other industry uses whose design requirements include high strength, toughness, and weight reduction.
Type 6/6 general purpose standard grade nylon. Extruded in natural and black. (Weather Resistant Black Grade is also available as a custom.)

General Information			
Features	Low friction coefficient		
	High strength		
	Impact resistance, good		
	Good chemical resistance		
	Good wear resistance		
	Good toughness		
	General		
Uses	Valve/valve components		
	Industrial application		
	Metal substitution		
	Application in Automobile Field		
	General		
Appearance	Black		
	Natural color		
Forms	Shapes		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.14	g/cm³	ASTM D792
Water Absorption			ASTM D570
23°C, 24 hr	1.2	%	ASTM D570
Saturated, 23°C	8.5	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
Class M, 23°C	90		ASTM D785
Class R, 23°C	120		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2410	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	82.7	MPa	ASTM D638

Tensile Elongation (Break, 23°C)	25	%	ASTM D638
Flexural Modulus (23°C)	3030	MPa	ASTM D790
Flexural Strength (23°C)	107	MPa	ASTM D790
Compressive Strength	34.5	MPa	ASTM D695
Coefficient of Friction [1] (vs. Itself - Dynamic)	0.26		ASTM D1894
Wear Factor [2] (0.28 MPa, 0.25 m/sec)	400	10^-8 $mm^3/N \cdot m$	ASTM D3702
Impact	**Nominal Value**	**Unit**	**Test Method**
Unnotched Izod Impact (23°C)	59	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	235	°C	ASTM D648
1.8 MPa, not annealed	90.0	°C	ASTM D648
Melting Temperature	255	°C	ASTM D2133
CLTE - Flow	8.1E-5	cm/cm/°C	ASTM D696
Specific Heat	1670	J/kg/°C	
Maximum Service Temperature			
Intermittent	149	°C	
Long Term	85	°C	UL 746B
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength	12 - 16	kV/mm	ASTM D149
Dielectric Constant [3]			ASTM D150
23°C, 60 Hz	4.00		ASTM D150
23°C, 1 MHz	3.60		ASTM D150
Dissipation Factor (23°C, 60 Hz)	0.010		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (3.00 mm)	V-2		UL 94
Additional Information			
Data obtained from extruded shapes material.			
NOTE			
1.	40 psi, 50 fpm		
2.	Against Steel		
3.	50% RH		

Recommended distributors for this material

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