TECANAT TECANAT

Polycarbonate

Ensinger Inc.

Message:

TECANAT is a natural unfilled polycarbonate that has transparency, excellent impact strength and tensile properties, TECANAT GF20 is a 20% glass-reinforced polycarbonate with higher temperature and tensile properties than the unfilled TECANAT.
Polycarbonate is an amorphous thermoplastic. Good electrical properties combined with superior impact strength and moderate chemical resistance make this product widely accepted for numerous applications, This product is offered in many popular rod and plate sizes.
Typical applications include business equipment where gears, rollers, internal mechanical parts, connectors and relays are required. The automotive industry uses polycarbonate materials for pumps, valves, light bezels and instrument panels. It also is applicable to many other industries.

General Information	
Features	Good dimensional stability
	Rigidity, high
	High strength
	Impact resistance, high
	Machinable
	Good electrical performance
	Good chemical resistance
	Definition, high
	amorphous
Uses	Pump parts
	Gear
	Valve/valve components
	Roller
	Connector
	Application in Automobile Field
	Business equipment
Appearance	Clear/transparent
	Natural color
Forms	Plate
	Bar

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Water Absorption [1]			ASTM D570
23°C, 24 hr	0.15	%	ASTM D570
Saturated, 23°C	0.35	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**

Rockwell Hardness			ASTM D785
M grade, 23°C, injection molding	70		ASTM D785
Grade R, 23°C, Injection Molding	118		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2340	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	62.7	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	90	%	ASTM D638
Flexural Modulus (23°C)	2210	MPa	ASTM D790
Flexural Strength (23°C)	99.3	MPa	ASTM D790
Coefficient of Friction [2] (vs. Itself - Dynamic)	0.38		
Wear Factor [3] (0.28 MPa, 0.25 m/sec)	5000	10^-8 mm³/N·m	ASTM D3702
Impact	**Nominal Value**	**Unit**	**Test Method**
Unnotched Izod Impact (23°C)	110	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, injection molded	138	°C	ASTM D648
1.8 MPa, unannealed, injection molded	132	°C	ASTM D648
Vicat Softening Temperature [4]	154	°C	ASTM D1525
CLTE - Flow [5]	6.8E-5	cm/cm/°C	ASTM D696
Specific Heat [6]	1260	J/kg/°C	ASTM C351
Thermal Conductivity [7]	0.19	W/m/K	ASTM C177
Maximum Service Temperature			
Intermittent	135	°C	
Long Term	121	°C	UL 746B
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity [8]	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength [9]	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 MHz [10]	2.96		ASTM D150
23°C, 60 Hz [11]	3.17		ASTM D150
Dissipation Factor [12] (23°C, 60 Hz)	9.0E-4		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating [13] (1.47 mm)	HB		UL 94
Additional Information			
Data obtained from extruded shapes material unless otherwise noted.			
NOTE			
1.	Injection Molded		
2.	40 psi, 50 fpm; Injection Molded		
3.	Against Steel, Injection Molded		
4.	Injection Molded		
5.	Injection Molded		

6.	Injection Molded
7.	Injection Molded
8.	Injection Molded
9.	Injection Molded
10.	Injection Molded
11.	50% RH, Injection Molded
12.	Injection Molded
13.	Injection Molded

Recommended distributors for this material

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