Plenco 04504 (Injection)

Phenolic

Plastics Engineering Co.

Message:

Plenco 04504 is a renumber of Plaslok 504. Plenco 04504 is a two-stage, mineral and cellulose-filled phenolic molding compound having better impact and heat resistance than general purpose molding compounds. Since it also has good electrical properties, it has found use in a wide variety of wiring device applications. It is UL recognized under file E40654. 04504 is available in black.

General Information				
UL YellowCard	E40654-231612			
Filler / Reinforcement	Mineral filler			
	Fiber filler			
Features	Impact resistance, good			
	Good electrical performance			
	Heat resistance, medium			
Uses	Wire and cable application	ıs		
UL File Number	E40654			
Appearance	Black			
Forms	Particles			
Processing Method	Injection molding			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	1.55	g/cm³	ASTM D792	
Apparent Density	0.64	g/cm³	ASTM D1895	
Molding Shrinkage - Flow	0.69	%	ASTM D955	
Water Absorption (24 hr)	0.22	%	ASTM D570	
Hardness	Nominal Value	Unit	Test Method	
Rockwell Hardness (E-Scale)	79		ASTM D785	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Modulus	9910	MPa	ASTM D638	
Tensile Strength	52.2	MPa	ASTM D638	
Tensile Elongation (Break)	0.70	%	ASTM D638	
Flexural Modulus	8880	МРа	ASTM D790	
Flexural Strength	79.0	MPa	ASTM D790	
Compressive Strength	173	MPa	ASTM D695	
Impact	Nominal Value	Unit	Test Method	
Charpy Notched Impact Strength	16.7	J/m	ASTM D256	
Notched Izod Impact	17	J/m	ASTM D256	
Thermal	Nominal Value	Unit	Test Method	

Deflection Temperature Under Load (1.8			
MPa, Unannealed)	178	°C	ASTM D648
Continuous Use Temperature	197	°C	ASTM D794
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	3.1E+11	ohms·cm	ASTM D257
Dielectric Strength ¹	10	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	5.60		ASTM D150
Dissipation Factor (1 MHz)	0.075		ASTM D150
Arc Resistance	177	sec	ASTM D495
Comparative Tracking Index (CTI)	175	V	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94

Additional Information

The value listed as Mold Shrink, Linear-Flow, ASTM D955 was tested according to the ASTM D6289 standard. The value listed as Comparative Tracking Index, UL 746 was tested according to ASTM D3638. Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.29% Drop Ball Impact, PLENCO Method: 99 J/m

Injection	Nominal Value	Unit
Suggested Shot Size	20 - 80	%
Rear Temperature	66.0 - 82.0	°C
Front Temperature	82.0 - 99.0	°C
Processing (Melt) Temp	104 - 115	°C
Mold Temperature	165 - 182	°C
Injection Pressure	6.20 - 11.0	MPa
Back Pressure	0.300	MPa
Screw Speed	< 60	rpm
Cushion	3.00	mm
Injection instructions		
Injection Time: 3-8 sec		

NOTE

1.

Method A (short time)

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