

Plenco 07021 (Injection)

Phenolic

Plastics Engineering Co.

Message:

PLENCO 07021 is a renumber of Plaslok 7021 which is the replacement material for the former Union Carbide BMRS-7021. It is impact grade phenolic molding compound suitable for switchgear parts, or where mechanical assembly requires better impact strength. PLENCO 07021 is UL recognized under component file E40654. 07021 is available in black.

General Information			
UL YellowCard	E40654-231625		
Features	Impact resistance, good		
Uses	Electrical components		
UL File Number	E40654		
Appearance	Black		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.38	g/cm ³	ASTM D792
Apparent Density	0.46	g/cm ³	ASTM D1895
Molding Shrinkage - Flow	1.1	%	ASTM D955
Water Absorption (24 hr)	0.50	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (E-Scale)	86		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8580	MPa	ASTM D638
Tensile Strength	57.0	MPa	ASTM D638
Tensile Elongation (Break)	0.80	%	ASTM D638
Flexural Modulus	6640	MPa	ASTM D790
Flexural Strength	72.3	MPa	ASTM D790
Compressive Strength	215	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	19.7	J/m	ASTM D256
Notched Izod Impact	24	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	152	°C	ASTM D648
Continuous Use Temperature	193	°C	ASTM D794
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.7E+14	ohms · cm	ASTM D257
Dielectric Strength ¹	11	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	4.50		ASTM D150

Dissipation Factor (1 MHz)	0.049		ASTM D150
Arc Resistance	76.0	sec	ASTM D495
Comparative Tracking Index (CTI)	175	V	UL 746

Additional Information

The value listed as Comparative Tracking Index, UL 746 was tested according to ASTM D3638. The value listed as Mold Shrink, Linear-Flow, ASTM D955 was tested according to the ASTM D6289 standard. Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.40% Drop Ball Impact, PLENCO Method: 133 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

- Method A (short time)

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