Plenco 04311 (Injection)

Phenolic

Plastics Engineering Co.

Message:

PLENCO 04311 is a heat resistant, mineral filled phenolic molding compound offering excellent processability, mechanical strength, and improved cold powder pourability characteristics. UL recognized under component file E40654. 04311 is available in black.

General Information			
UL YellowCard	E40654-231607		
Filler / Reinforcement	Mineral filler		
Features	Workability, good Good strength Heat resistance, high		
UL File Number	E40654		
Appearance	Black		
Forms	Particles		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.48	g/cm³	ASTM D792
Apparent Density	0.71	g/cm³	ASTM D1895
Molding Shrinkage - Flow	0.83	%	ASTM D955
Water Absorption (24 hr)	0.27	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (E-Scale)	79		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	9120	MPa	ASTM D638
Tensile Strength	57.0	MPa	ASTM D638
Tensile Elongation (Break)	0.80	%	ASTM D638
Flexural Modulus	8030	MPa	ASTM D790
Flexural Strength	89.1	MPa	ASTM D790
Compressive Strength	176	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	16.5	J/m	ASTM D256
Notched Izod Impact	15	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	167	°C	ASTM D648
Continuous Use Temperature	206	°C	ASTM D794
CLTE - Flow	5.0E-5	cm/cm/°C	ASTM E831
Thermal Conductivity (100°C)	0.49	W/m/K	ASTM C177

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	4.1E+11	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
-- [1]	11	kV/mm	ASTM D149
-- [2]	7.7	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	5.20		ASTM D150
Dissipation Factor (1 MHz)	0.060		ASTM D150
Arc Resistance	158	sec	ASTM D495
Comparative Tracking Index (CTI)	175	V	UL 746

Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-1		UL 94
Oxygen Index	29	%	ASTM D2863

Additional Information
The value listed as Thermal Conductivity, ASTM C177 was tested according to the ASTM E1461 standard.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%Heat Resistance, ASTM D794: 206°CDrop Ball Impact, PLENCO Method: 87 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)
2.	Method B (step by step)

Recommended distributors for this material

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