

# Plenco 02311 (Injection)

Phenolic

Plastics Engineering Co.

## Message:

PLENCO 02311 is a versatile general purpose organic filled phenolic molding compound offering excellent mold processability and optimized cure cycles. PLENCO 02311 is also granulated to provide improved pourability characteristics for cold powder compression molding. UL recognized under component file E40654. 02311 is available in black or brown color.

General Information			
UL YellowCard	E40654-231585		
Filler / Reinforcement	Organic filler		
Features	Workability, good		
	Fast curing		
	General		
Uses	General		
UL File Number	E40654		
Appearance	Brown		
	Black		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm <sup>3</sup>	ASTM D792
Apparent Density	0.65	g/cm <sup>3</sup>	ASTM D1895
Molding Shrinkage - Flow	1.0	%	ASTM D955
Water Absorption (24 hr)	0.43	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (E-Scale)	83		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8440	MPa	ASTM D638
Tensile Strength	59.0	MPa	ASTM D638
Tensile Elongation (Break)	0.80	%	ASTM D638
Flexural Modulus	7280	MPa	ASTM D790
Flexural Strength	85.9	MPa	ASTM D790
Compressive Strength	198	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	17.8	J/m	ASTM D256
Notched Izod Impact	16	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (1.8 MPa, Unannealed)	157	°C	ASTM D648
Continuous Use Temperature	201	°C	ASTM D794
CLTE - Flow	5.7E-5	cm/cm/°C	ASTM E831
Thermal Conductivity (100°C)	0.40	W/m/K	ASTM C177
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity	1.0E+12	ohms·cm	ASTM D257
Dielectric Strength <sup>1</sup>	9.1	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	5.30		ASTM D150
Dissipation Factor (1 MHz)	0.081		ASTM D150
Arc Resistance	144	sec	ASTM D495
Comparative Tracking Index (CTI)	175	V	UL 746
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (1.50 mm)	HB		UL 94
Oxygen Index	27	%	ASTM D2863

#### 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. The value listed as Thermal Conductivity, ASTM C177 was tested according to the ASTM E1461 standard. Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.43% Heat Resistance, ASTM D794: 201°C Drop Ball Impact, PLENCO Method: 98 J/m

<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>
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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#### Recommended distributors for this material

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