

# Plenco 05482 (Injection)

Phenolic

Plastics Engineering Co.

## Message:

PLENCO 05482 is an organic reinforced phenolic molding compound formulated with graphite to improve the abrasion resistance. 05482 is available in black and brown. 05482 is not recommended for electrical insulating applications.

General Information			
UL YellowCard	E40654-231618		
Filler / Reinforcement	Graphite powder		
	Organic filler		
Features	Good wear resistance		
Appearance	Brown		
	Black		
Forms	Particles		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.43	g/cm <sup>3</sup>	ASTM D792
Apparent Density	0.66	g/cm <sup>3</sup>	ASTM D1895
Molding Shrinkage - Flow	0.91	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (E-Scale)	88		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	8680	MPa	ASTM D638
Tensile Strength	64.0	MPa	ASTM D638
Tensile Elongation (Break)	0.90	%	ASTM D638
Flexural Modulus	7340	MPa	ASTM D790
Flexural Strength	94.3	MPa	ASTM D790
Compressive Strength	208	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	18.3	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	199	°C	ASTM D794
CLTE - Flow	5.2E-5	cm/cm/°C	ASTM E831
Thermal Conductivity (100°C)	0.44	W/m/K	ASTM C177

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.6E+11	ohms·cm	ASTM D257
Dielectric Strength <sup>1</sup>	9.1	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	5.70		ASTM D150
Dissipation Factor (1 MHz)	0.050		ASTM D150
Arc Resistance	25.0	sec	ASTM D495
Comparative Tracking Index (CTI)	200	V	UL 746
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	28	%	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: 0.30% Drop Ball Impact, PLENCO Method: 98 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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