Plenco 05118 (Compression)

Phenolic

Plastics Engineering Co.

Message:

PLENCO 05118 is a mineral and graphite filled phenolic molding compound, formulated for bearing seals. 05118 provides for a low coefficient of friction, abrasion resistance, minimal water absorption, and excellent dimensional stability under severe exposure. 05118 is available in gray. 05118 is not recommended for electrical insulating applications.

General Information			
Filler / Reinforcement	Mineral filler Graphite powder		
Features	Good dimensional stability Low friction coefficient Good wear resistance Low or no water absorption		
Uses	Insulating material Seals		
Appearance	Grey		
Forms	Particles		
Processing Method	Compression molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.81	g/cm³	ASTM D792
Apparent Density	0.87	g/cm³	ASTM D1895
Molding Shrinkage - Flow	0.19	%	ASTM D955
Water Absorption (24 hr)	0.050	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (E-Scale)	59		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	12000	MPa	ASTM D638
Tensile Strength	32.0	MPa	ASTM D638
Tensile Elongation (Break)	0.40	%	ASTM D638
Flexural Modulus	9890	MPa	ASTM D790
Flexural Strength	54.7	MPa	ASTM D790
Compressive Strength	134	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength	17.4	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)	194	°C	ASTM D648
Continuous Use Temperature	212	°C	ASTM D794
CLTE - Flow	3.2E-5	cm/cm/°C	ASTM E831
Thermal Conductivity (100°C)	1.2	W/m/K	ASTM C177

Flammability	Nominal Value	Unit	Test Method
Oxygen Index	43	%	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.Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.06%Drop Ball Impact, PLENCO Method: 57 J/m

Injection	Nominal Value	Unit
Drying Temperature	90.0	°C
Drying Time	0.50	hr
Mold Temperature	165 - 182	°C
Back Pressure	0.300	MPa
Screw Speed	< 60	rpm

Injection instructions

Mold Close Time: 3-8 sec

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