Plenco 02000 (Injection)

Phenolic

Plastics Engineering Co.

Message:

PLENCO 02000 is a versatile general purpose, organic filled phenolic molding compound, offering optimum cure characteristics and an excellent balance of molding properties. UL recognized under component file E40654. 02000 is available in black.

Display Disp	General Information			
Features Fast curing General Uses General Ut. File Number E40654 Appearance Black Forms Particles Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.40 g/cm³ ASTM D792 Apparent Density 0.59 g/cm³ ASTM D995 Water Absorption (24 hr) 1.0 % ASTM D995 Water Absorption (24 hr) 0.32 % ASTM D793 Macharicas Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 86 Water Absorption (24 hr) Test Method Rockwell Hardness (E-Scale) 86 Water Absorption (24 hr) Test Method Rockwell Hardness (E-Scale) 86 Water Absorption (24 hr) Test Method Rockwell Hardness (E-Scale) 86 Water Absorption (24 hr) ASTM D683 Testile Modulus 7620 MPa ASTM D683 Testile Strength 77.0 MPa	UL YellowCard	E40654-231583		
Uses General UL. File Number £40654 Appearance Black Forms Particles Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1,40 g/cm² ASTM D792 Apparent Density 0,59 g/cm² ASTM D955 Water Absorption (24 hr) 0,32 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 86 ✓ ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Elongation (Break) 7620 MPa ASTM D638 Tensile Elongation (Break) 8.8 % ASTM D638 Flexural Modulus 6820 MPa ASTM D638 Flexural Strength 8.8 MPa ASTM D695 Flexural Strength 8.8 MPa ASTM D696 Charpy Notched Impact Strength 19.8 MPa ASTM D695	Filler / Reinforcement	Organic filler		
Uses General UL File Number £40654 Appearance Black Forms Particles Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.40 ½/cm² ASTM D792 Apparent Density 0.59 ½/cm² ASTM D955 Molding Shrinkage - Flow 1.0 % ASTM D955 Mater Absorption (24 hr) 0.32 % ASTM D792 Mater Absorption (24 hr) 0.32 % ASTM D785 Mechanical Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 86 ASTM D78 Mechanical Nominal Value Unit Test Method Tensile Modulus 7620 MPa ASTM D638 Tensile Elongation (Break) 0.80 % ASTM D638 Flexural Strength 80.8 MPa ASTM D695 Flexural Strength 80.8 MPa ASTM D695 Impact <	Features	Fast curing		
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Molding Shrinkage - Flow 1.0 % ASTM D955 Water Absorption (24 hr) 0.32 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 86 Test Method ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 7620 MPa ASTM D638 Tensile Elongation (Break) 57.0 MPa ASTM D638 Flexural Modulus 6820 MPa ASTM D638 Flexural Strength 80.8 MPa ASTM D790 Compressive Strength 198 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 17.9 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) 155 "C ASTM D648 Continuous Use Temperature 155 "C <td>Specific Gravity</td> <td>1.40</td> <td>g/cm³</td> <td>ASTM D792</td>	Specific Gravity	1.40	g/cm³	ASTM D792
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Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 86	Molding Shrinkage - Flow	1.0	%	ASTM D955
Rockwell Hardness (E-Scale) 86 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 7620 MPa ASTM D638 Tensile Strength 57.0 MPa ASTM D638 Tensile Elongation (Break) 0.80 % ASTM D638 Flexural Modulus 6820 MPa ASTM D790 Flexural Strength 80.8 MPa ASTM D790 Compressive Strength 198 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 17.9 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) 155 °C ASTM D648 Continuous Use Temperature 198 °C ASTM D794 CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831	Water Absorption (24 hr)	0.32	%	ASTM D570
MechanicalNominal ValueUnitTest MethodTensile Modulus7620MPaASTM D638Tensile Strength57.0MPaASTM D638Tensile Elongation (Break)0.80%ASTM D638Flexural Modulus6820MPaASTM D790Flexural Strength80.8MPaASTM D790Compressive Strength198MPaASTM D695ImpactNominal ValueUnitTest MethodCharpy Notched Impact Strength17.9J/mASTM D256Notched Izod Impact15J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)155°CASTM D648Continuous Use Temperature198°CASTM D794CLTE - Flow5.1E-5cm/cm/°CASTM D794	Hardness	Nominal Value	Unit	Test Method
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Flexural Strength 80.8 MPa ASTM D790 Compressive Strength 198 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 17.9 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) 155 °C ASTM D648 Continuous Use Temperature 198 °C ASTM D794 CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831	Tensile Elongation (Break)	0.80	%	ASTM D638
Compressive Strength198MPaASTM D695ImpactNominal ValueUnitTest MethodCharpy Notched Impact Strength17.9J/mASTM D256Notched Izod Impact15J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)155°CASTM D648Continuous Use Temperature198°CASTM D794CLTE - Flow5.1E-5cm/cm/°CASTM E831	Flexural Modulus	6820	MPa	ASTM D790
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Charpy Notched Impact Strength 17.9 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) 155 °C ASTM D648 Continuous Use Temperature 198 °C ASTM D794 CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831	Compressive Strength	198	MPa	ASTM D695
Notched Izod Impact 15 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 155 °C ASTM D648 Continuous Use Temperature 198 °C ASTM D794 CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831	Impact	Nominal Value	Unit	Test Method
Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 155 °C ASTM D648 Continuous Use Temperature 198 °C ASTM D794 CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831	Charpy Notched Impact Strength	17.9	J/m	ASTM D256
Deflection Temperature Under Load (1.8 MPa, Unannealed) 155 Continuous Use Temperature 198 CLTE - Flow 5.1E-5 cm/cm/°C ASTM D648 ASTM D794 ASTM E831	Notched Izod Impact	15	J/m	ASTM D256
MPa, Unannealed) 155 °C ASTM D648 Continuous Use Temperature 198 °C ASTM D794 CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831	Thermal	Nominal Value	Unit	Test Method
CLTE - Flow 5.1E-5 cm/cm/°C ASTM E831		155	°C	ASTM D648
	Continuous Use Temperature	198	°C	ASTM D794
Electrical Nominal Value Unit Test Method	CLTE - Flow	5.1E-5	cm/cm/°C	ASTM E831
	Electrical	Nominal Value	Unit	Test Method

Volume Resistivity	2.3E+11	ohms·cm	ASTM D257
Dielectric Strength ¹	8.4	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	5.40		ASTM D150
Dissipation Factor (1 MHz)	0.059		ASTM D150
Arc Resistance	134	sec	ASTM D495
Comparative Tracking Index (CTI)	150	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			

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.Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.38%Heat Resistance, ASTM D794: 198°CDrop Ball Impact, PLENCO Method: 94 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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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

