Plenco 01530 (Injection)

Thermoset Polyester

Plastics Engineering Co.

Message:

PLENCO 01530 is a glass and mineral reinforced pelletized polyester molding compound, offering improved mechanical strength properties along with excellent electrical properties and dimensional stability. UL recognized under component file E40654. 01530 is available in black.

Discription Engineering	General Information			
Features Good dimensional stability Good electrical performance Good strength	UL YellowCard	E40654-231663		
Li File Number	Filler / Reinforcement	Mineral filler		
Good strength UL File Number E40654 Appearance Black Forms Blank Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.99 ½/cm² ASTM D792 Apparent Density 0.87 ½/cm² ASTM D895 Molding Strinkage - Flow 0.31 ½ ASTM D895 Mater Absorption (24 hr) 0.33 ½ ASTM D895 Mater Absorption (24 hr) 0.13 ½ ASTM D790 Rackwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Medulus 20100 MPa ASTM D638 Tensile Elongation (Break) 0.60 ½ ASTM D638 Tensile Strength 156 MPa ASTM D790 Elexard Strength 156 MPa ASTM D695 Flexural Strength 166 MPa ASTM D695 Impact	Features	Good dimensional stability		
E40654 Appearance Black Forms Blank Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.99 g/cm³ ASTM D792 Apparent Density 0.87 g/cm² ASTM D1895 Molding Shrinkage - Flow 0.31 % ASTM D955 Mater Absorption (24 hr) 0.13 % ASTM D780 Mackwell Hardness (E-Scale) 78 Unit Test Method Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Elexural Strength 135 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26 //m ASTM D256		Good electrical performance		
Appearance Black Forms Blank Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.99 g/cm³ A5TM D792 Apparent Density 0.87 g/cm³ A5TM D895 Molding Shrinkage - Flow 0.31 % A5TM D955 Water Absorption (24 hr) 0.13 % A5TM D780 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 A5TM D785 Mechanical Nominal Value Unit Test Method Tensile Strength 2010 MPa A5TM D638 Tensile Strength 220 MPa A5TM D638 Tensile Strength 17600 MPa A5TM D638 Flexural Modulus 17600 MPa A5TM D790 Elevaral Strength 260 MPa A5TM D655 Impact Nominal Value Unit Test Method Charpy Notchel Impact Strength 269		Good strength		
Appearance Black Forms Blank Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.99 g/cm³ A5TM D792 Apparent Density 0.87 g/cm³ A5TM D895 Molding Shrinkage - Flow 0.31 % A5TM D955 Water Absorption (24 hr) 0.13 % A5TM D780 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 A5TM D785 Mechanical Nominal Value Unit Test Method Tensile Strength 2010 MPa A5TM D638 Tensile Strength 220 MPa A5TM D638 Tensile Strength 17600 MPa A5TM D638 Flexural Modulus 17600 MPa A5TM D790 Elevaral Strength 260 MPa A5TM D655 Impact Nominal Value Unit Test Method Charpy Notchel Impact Strength 269				
Forms Blank Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.99 g/cm² ASTM D792 Apparent Density 0.87 g/cm² ASTM D1895 Molding Shrinkage - Flow 0.31 % ASTM D955 Water Absorption (24 hr) 0.13 % ASTM D790 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Flexural Modulus 17600 MPa ASTM D638 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 <t< td=""><td>UL File Number</td><td>E40654</td><td></td><td></td></t<>	UL File Number	E40654		
Processing Method Injection molding Physical Nominal Value Unit Test Method Specific Gravity 1.99 g/cm³ ASTM D792 Apparent Density 0.87 g/cm³ ASTM D1895 Molding Shrinkage - Flow 0.31 % ASTM D955 Water Absorption (24 hr) 0.13 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Flexural Modulus 17600 MPa ASTM D638 Flexural Strength 135 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact Nominal Value </td <td>Appearance</td> <td>Black</td> <td></td> <td></td>	Appearance	Black		
Physical Nominal Value Unit Test Method Specific Gravity 1.99 g/cm³ ASTM D792 Apparent Density 0.87 g/cm³ ASTM D1895 Molding Shrinkage - Flow 0.31 % ASTM D955 Water Absorption (24 hr) 0.13 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 Unit Test Method Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Elexural Strength 135 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 <tr< td=""><td>Forms</td><td>Blank</td><td></td><td></td></tr<>	Forms	Blank		
Specific Gravity 1.99 g/cm³ ASTM D792 Apparent Density 0.87 g/cm³ ASTM D1895 Molding Shrinkage - Flow 0.31 % ASTM D955 Water Absorption (24 hr) 0.13 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 Unit Test Method Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256	Processing Method	Injection molding		
Apparent Density 0.87 g/cm³ ASTM D1895 Molding Shrinkage - Flow 0.31 % ASTM D955 Water Absorption (24 hr) 0.13 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Elongation (Break) 0.60 MPa ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D790 Flexural Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) Nominal Value Unit Test Method Deflection Temperature 262 "C	Physical	Nominal Value	Unit	Test Method
Molding Shrinkage - Flow 0.31 % ASTM D955 Water Absorption (24 hr) 0.13 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Elongation (Break) 82.0 MPa ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) ASTM D264 ASTM D648 Continuous Use Temperature 262 °C ASTM D794	Specific Gravity	1.99	g/cm³	ASTM D792
Water Absorption (24 hr) 0.13 % ASTM D570 Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Flexural Modulus 17600 MPa ASTM D638 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Notched Izod Impact Strength Ce ASTM D648 Deflection Temperature Under Load (1.8 MPa, Unannealed) C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm/r°C ASTM E831	Apparent Density	0.87	g/cm³	ASTM D1895
Hardness Nominal Value Unit Test Method Rockwell Hardness (E-Scale) 78 XSTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CITE-Flow 4.3E-5 cm/cm/°C ASTM E831 <	Molding Shrinkage - Flow	0.31	%	ASTM D955
Rockwell Hardness (E-Scale) 78 ASTM D785 Mechanical Nominal Value Unit Test Method Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm/°C ASTM E831	Water Absorption (24 hr)	0.13	%	ASTM D570
MechanicalNominal ValueUnitTest MethodTensile Modulus20100MPaASTM D638Tensile Strength82.0MPaASTM D638Tensile Elongation (Break)0.60%ASTM D638Flexural Modulus17600MPaASTM D790Flexural Strength135MPaASTM D790Compressive Strength166MPaASTM D695ImpactNominal ValueUnitTest MethodCharpy Notched Impact Strength26.9J/mASTM D256Notched Izod Impact34J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)262°CASTM D648Continuous Use Temperature221°CASTM D794CLTE - Flow4.3E-5cm/cm/°CASTM D794	Hardness	Nominal Value	Unit	Test Method
Tensile Modulus 20100 MPa ASTM D638 Tensile Strength 82.0 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm/c°C ASTM E831	Rockwell Hardness (E-Scale)	78		ASTM D785
Tensile Strength 82.0 MPa ASTM D638 Tensile Elongation (Break) 0.60 % ASTM D638 Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) ASTM D256 ASTM D648 Continuous Use Temperature 262 °C ASTM D648 Continuous Use Temperature 4.3E-5 cm/cm/°C ASTM E831	Mechanical	Nominal Value	Unit	Test Method
Tensile Elongation (Break) 6.60 6.	Tensile Modulus	20100	MPa	ASTM D638
Flexural Modulus 17600 MPa ASTM D790 Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 435 MPa, Unannealed 435 Cm/cm°C ASTM E831	Tensile Strength	82.0	MPa	ASTM D638
Flexural Strength 135 MPa ASTM D790 Compressive Strength 166 MPa ASTM D695 Impact Nominal Value Unit Test Method Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm°C ASTM E831	Tensile Elongation (Break)	0.60	%	ASTM D638
Compressive Strength166MPaASTM D695ImpactNominal ValueUnitTest MethodCharpy Notched Impact Strength26.9J/mASTM D256Notched Izod Impact34J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)262°CASTM D648Continuous Use Temperature221°CASTM D794CLTE - Flow4.3E-5cm/cm/°CASTM E831	Flexural Modulus	17600	MPa	ASTM D790
ImpactNominal ValueUnitTest MethodCharpy Notched Impact Strength26.9J/mASTM D256Notched Izod Impact34J/mASTM D256ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)°CASTM D648Continuous Use Temperature221°CASTM D794CLTE - Flow4.3E-5cm/cm/°CASTM E831	Flexural Strength	135	MPa	ASTM D790
Charpy Notched Impact Strength 26.9 J/m ASTM D256 Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm/°C ASTM E831	Compressive Strength	166	MPa	ASTM D695
Notched Izod Impact 34 J/m ASTM D256 Thermal Nominal Value Unit Test Method Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm/°C ASTM E831	Impact	Nominal Value	Unit	Test Method
ThermalNominal ValueUnitTest MethodDeflection Temperature Under Load (1.8 MPa, Unannealed)262°CASTM D648Continuous Use Temperature221°CASTM D794CLTE - Flow4.3E-5cm/cm/°CASTM E831	Charpy Notched Impact Strength	26.9	J/m	ASTM D256
Deflection Temperature Under Load (1.8 MPa, Unannealed) 262 Continuous Use Temperature 221 CLTE - Flow 4.3E-5 cm/cm/°C ASTM D648 ASTM D794 ASTM E831	Notched Izod Impact	34	J/m	ASTM D256
MPa, Unannealed) 262 °C ASTM D648 Continuous Use Temperature 221 °C ASTM D794 CLTE - Flow 4.3E-5 cm/cm/°C ASTM E831	Thermal	Nominal Value	Unit	Test Method
CLTE - Flow 4.3E-5 cm/cm/°C ASTM E831	·	262	°C	ASTM D648
	Continuous Use Temperature	221	°C	ASTM D794
Thermal Conductivity (100°C) 0.72 W/m/K ASTM C177	CLTE - Flow	4.3E-5	cm/cm/°C	ASTM E831
	Thermal Conductivity (100°C)	0.72	W/m/K	ASTM C177

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.0E+15	ohms·cm	ASTM D257
Dielectric Strength			ASTM D149
1	15	kV/mm	ASTM D149
²	12	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	4.60		ASTM D150
Dissipation Factor (1 MHz)	0.016		ASTM D150
Arc Resistance	190	sec	ASTM D495
Comparative Tracking Index (CTI)	600	V	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	НВ		UL 94
Oxygen Index	25	%	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. The value listed as Thermal Conductivity, ASTM C177 was tested according to the ASTM E1461 standard. Post Shrinkage, ASTM D6289, 72hr, 120°C: 0.01% Heat Resistance, ASTM D794: 221°CDrop Ball Impact, PLENCO Method: 200 J/m

Injection	Nominal Value	Unit
Suggested Shot Size	20 - 80	%
Rear Temperature	49.0 - 71.0	°C
Front Temperature	85.0 - 93.0	°C
Processing (Melt) Temp	93.0 - 100	°C
Mold Temperature	163 - 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: 3-6 sec		
NOTE		
1.	Method A (short time)	
2.	Method B (step by step)	

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