

Chemlon® 253-15GHIU

Teknor Apex Company (Chem Polymer) - Polyamide 6

General Information

Product Description

253-15GHIU is a 15% glass fibre reinforced, impact modified nylon 6 that offers good mechanical performance coupled with good surface finish. It is heat & UV stabilised so that the good mechanical performance and surface appearance is maintained when exposed to high service temperature and weathering resistance.

Colour change after 2500kJ/m² exposure (SAE J 1960) <3 Delta E

General				
Material Status	Commercial: Active			
Availability	• Europe			
Filler / Reinforcement	 Glass Fiber, 15% Filler by 	Glass Fiber, 15% Filler by Weight		
Additive	Heat Stabilizer	 Impact Modifier 	UV Stabilizer	
Features	Good Surface FinishHeat Stabilized	 Impact Modified Light Stabilized	Weather Resistant	
Processing Method	Injection Molding			

Density 1.21 g/cm³ ISO 1183 Molding Shrinkage² 0.80 to 1.5 % Internal Method Water Absorption (Equilibrium, 73°F, 50% RH) 2.2 % ISO 62 Mechanical Nominal Value Unit Test Method Tensile Stress 13800 psi ISO 527-2 Tensile Strain (Yield) 3.0 % ISO 527-2 Tensile Strain (Break) 4.0 % ISO 527-2 Flexural Modulus 58000 psi ISO 178 Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60112	ASTM & ISO Properties 1				
Molding Shrinkage² 0.80 to 1.5 % Internal Method Water Absorption (Equilibrium, 73°F, 50% RH) 2.2 % ISO 62 Mechanical Nominal Value Unit Test Method Tensile Stress 13800 psi ISO 527-2 Tensile Strain (Yield) 3.0 % ISO 527-2 Tensile Strain (Break) 4.0 % ISO 527-2 Flexural Modulus 58000 psi ISO 178 Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Nothed Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 365 °F ISO 75-2/B CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms-cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 600112	Physical	Nominal Value	Unit	Test Method	
Water Absorption (Equilibrium, 73°F, 50% RH) 2.2 % ISO 62 Mechanical Nominal Value Unit Test Method Tensile Stress 13800 psi ISO 527-2 Tensile Strain (Yield) 3.0 % ISO 527-2 Tensile Strain (Break) 4.0 % ISO 527-2 Flexural Modulus 58000 psi ISO 178 Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 365 °F ISO 75-2/A CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112	Density	1.21	g/cm³	ISO 1183	
Mechanical Nominal Value Unit Test Method Tensile Stress 13800 psi 150 527-2 Tensile Strain (Yield) 3.0 % 150 527-2 Tensile Strain (Break) 4.0 % 150 527-2 Flexural Modulus 58000 psi 150 178 Flexural Stress 18100 psi 150 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft-lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 365 °F ISO 75-2/A CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms-cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index Nom	Molding Shrinkage ²	0.80 to 1.5	%	Internal Method	
Tensile Stress 13800 psi ISO 527-2 Tensile Strain (Yield) 3.0 % ISO 527-2 Tensile Strain (Break) 4.0 % ISO 527-2 Flexural Modulus 58000 psi ISO 178 Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method	Water Absorption (Equilibrium, 73°F, 50% RH)	2.2	%	ISO 62	
Tensile Strain (Yield) 3.0 % ISO 527-2 Tensile Strain (Break) 4.0 % ISO 527-2 Flexural Modulus 58000 psi ISO 178 Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms-cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method	Mechanical	Nominal Value	Unit	Test Method	
Tensile Strain (Break) 4.0 % ISO 527-2 Flexural Modulus 58000 psi ISO 178 Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 365 °F ISO 75-2/A CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Tensile Stress	13800	psi	ISO 527-2	
Flexural Modulus	Tensile Strain (Yield)	3.0	%	ISO 527-2	
Flexural Stress 18100 psi ISO 178 Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft-Ib/lin² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 365 °F ISO 75-2/A CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Tensile Strain (Break)	4.0	%	ISO 527-2	
Impact Nominal Value Unit Test Method Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) 383 °F ISO 75-2/B Heat Deflection Temperature (264 psi, Unannealed) 365 °F ISO 75-2/A CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Flexural Modulus	58000	psi	ISO 178	
Notched Izod Impact Strength 6.2 ft·lb/in² ISO 180/A Thermal Nominal Value Heat Deflection Temperature (66 psi, Unannealed) Heat Deflection Temperature (264 psi, Unannealed) CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Volume Resistivity Electric Strength (0.118 in) Comparative Tracking Index Flammability Nominal Value Nominal Value Nominal Value Nominal Value HB UL 94	Flexural Stress	18100	psi	ISO 178	
Thermal Nominal Value Unit Test Method Heat Deflection Temperature (66 psi, Unannealed) Heat Deflection Temperature (264 psi, Unannealed) CLTE - Flow CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) Comparative Tracking Index Flammability Nominal Value Unit Test Method VI IEC 60112 Flammability Nominal Value Unit Test Method	Impact	Nominal Value	Unit	Test Method	
Heat Deflection Temperature (66 psi, Unannealed) Heat Deflection Temperature (264 psi, Unannealed) CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) Comparative Tracking Index Flammability Nominal Value Unit Test Method IEC 60243-1 IEC 60243-1 IEC 60112 Nominal Value Nominal Value Unit Test Method IEC 60112	Notched Izod Impact Strength	6.2	ft·lb/in²	ISO 180/A	
Heat Deflection Temperature (264 psi, Unannealed) CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index Flammability Nominal Value Unit Test Method HB UL 94	Thermal	Nominal Value	Unit	Test Method	
CLTE - Flow 3.1E-5 in/in/°F Internal Method Electrical Nominal Value Unit Test Method Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Heat Deflection Temperature (66 psi, Unannealed)	383	°F	ISO 75-2/B	
ElectricalNominal ValueUnitTest MethodVolume Resistivity1.0E+16ohms·cmIEC 60093Electric Strength (0.118 in)280V/milIEC 60243-1Comparative Tracking Index500VIEC 60112FlammabilityNominal ValueUnitTest MethodFlame Rating (0.06 in, Teknor Apex test result)HBUL 94	Heat Deflection Temperature (264 psi, Unannealed)	365	°F	ISO 75-2/A	
Volume Resistivity 1.0E+16 ohms·cm IEC 60093 Electric Strength (0.118 in) 280 V/mil IEC 60243-1 Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	CLTE - Flow	3.1E-5	in/in/°F	Internal Method	
Electric Strength (0.118 in) Comparative Tracking Index 500 V IEC 60243-1 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Electrical	Nominal Value	Unit	Test Method	
Comparative Tracking Index 500 V IEC 60112 Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Volume Resistivity	1.0E+16	ohms·cm	IEC 60093	
Flammability Nominal Value Unit Test Method Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Electric Strength (0.118 in)	280	V/mil	IEC 60243-1	
Flame Rating (0.06 in, Teknor Apex test result) HB UL 94	Comparative Tracking Index	500	V	IEC 60112	
	Flammability	Nominal Value	Unit	Test Method	
Oxygen Index 22 % ISO 4589-2	Flame Rating (0.06 in, Teknor Apex test result)	HB		UL 94	
	Oxygen Index	22	%	ISO 4589-2	

Processing Information		
Injection	Nominal Value Unit	
Drying Temperature	176 °F	
Drying Time	2.0 hr	
Rear Temperature	464 to 518 °F	
Middle Temperature	464 to 518 °F	
Front Temperature	464 to 518 °F	

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Nominal Value Unit
464 to 518 °F
140 to 176 °F
Fast
Low
Moderate

No drying is necessary unless the material has been exposed to air for longer than three hours. The appearance of splash marks on the surface of mouldings indicates excessive moisture is present.

Notes

¹ Typical properties: these are not to be construed as specifications.

² Mould shrinkage is significantly influenced by many factors including wall thickness, gating, moulding shape and processing conditions. The range values given are determined from specimen bar mouldings of 1.5mm to 4mm wall thickness. They are provided as a guide for comparison purposes only and no guarantee should be inferred from their inclusion. (Specimens measured in the dry state, 24 hours after moulding).