ForTii®

ForTii® MX15HR

PPA-GF35

35% Glass Reinforced, PA4T, Enhanced Hydrolytic Stability, for Automotive applications

Print Date: 2019-10-22

ForTii® MX15HR exhibits enhanced hydrolytic stability towards aggressive coolants (water/glycol, 135°C) that are used in engine's thermal management systems.

Properties	Typical Data	Unit	Test Method
Rheological properties	dry / cond		
Molding shrinkage (parallel)	0.35 / *	%	ISO 294-4
Molding shrinkage (normal)	1.05 / *	%	ISO 294-4
Mechanical properties	dry / cond		
Tensile modulus	12500 / 12500	MPa	ISO 527-1/-2
Tensile modulus (-40°C)	12500 / -	MPa	ISO 527-1/-2
Tensile modulus (100°C)	11600 / -	MPa	ISO 527-1/-2
Tensile modulus (120°C)	11200 / -	MPa	ISO 527-1/-2
Tensile modulus (150°C)	5300	MPa	ISO 527-1/-2
Tensile modulus (200°C)	3740	MPa	ISO 527-1/-2
Stress at break	240 / 220	MPa	ISO 527-1/-2
Stress at break (-40°C)	260 / -	MPa	ISO 527-1/-2
Stress at break (100°C)	170 / -	MPa	ISO 527-1/-2
Stress at break (120°C)	145 / -	MPa	ISO 527-1/-2
Stress at break (150°C)	80	MPa	ISO 527-1/-2
Stress at break (200°C)	55	MPa	ISO 527-1/-2
Strain at break	2.6 / 2.4	%	ISO 527-1/-2
Strain at break (-40°C)	2.7 / -	%	ISO 527-1/-2
Strain at break (100°C)	2.7 / -	%	ISO 527-1/-2
Strain at break (120°C)	2.8 / -	%	ISO 527-1/-2
Strain at break (150°C)	8	%	ISO 527-1/-2

Property Data

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Properties	Typical Data	Unit	Test Method
Strain at break (200°C)	8	%	ISO 527-1/-2
Charpy notched impact strength (+23°C)	12 / -	kJ/m²	ISO 179/1eA
Thermal properties	dry / cond		
Melting temperature (10°C/min)	330 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	300 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.16 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.51 / *	E-4/°C	ISO 11359-1/-2
Other properties	dry / cond		
Humidity absorption	2 / *	%	Sim. to ISO 62
Density	1490 / -	kg/m³	ISO 1183