Stanyl®

Stanyl® HGR1

PA46

Heat Stabilized, Wear and Friction Modified

Properties	Typical Data	Unit	Test Method
Rheological properties	dry / cond		
Molding shrinkage [parallel]	1.4 / *	%	Sim. to ISO 294-4
Molding shrinkage [normal]	1.4 / *	%	Sim. to ISO 294-4
Mechanical properties	dry / cond		
Tensile modulus	3700 / 1200	MPa	ISO 527-1/-2
Tensile modulus (120°C)	1100 / -	MPa	ISO 527-1/-2
Tensile modulus (160°C)	950	MPa	ISO 527-1/-2
Tensile modulus (180°C)	900	MPa	ISO 527-1/-2
Tensile modulus (200°C)	800	MPa	ISO 527-1/-2
Yield stress (120°C)	50	MPa	ISO 527-1/-2
Yield stress (160°C)	40	MPa	ISO 527-1/-2
Yield stress (180°C)	40	MPa	ISO 527-1/-2
Yield stress (200°C)	35	MPa	ISO 527-1/-2
Nominal strain at break	6 / 30	%	ISO 527-1/-2
Nominal strain at break (120°C)	>50	%	ISO 527-1/-2
Nominal strain at break (160°C)	>50	%	ISO 527-1/-2
Nominal strain at break (180°C)	>50	%	ISO 527-1/-2
Nominal strain at break (200°C)	>50	%	ISO 527-1/-2
Stress at break	100 / 55	MPa	ISO 527-1/-2
Flexural modulus	3200 / 1000	MPa	ISO 178
Flexural modulus (120°C)	1100	MPa	ISO 178
Flexural modulus (160°C)	850	MPa	ISO 178
Flexural strength	150 / 50	MPa	ISO 178

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Property Data

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Properties	Typical Data	Unit	Test Method
Flexural strength (120°C)	40	MPa	ISO 178
Flexural strength (160°C)	30	MPa	ISO 178
Charpy notched impact strength (+23°C)	5 / 15	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	3 / 2.5	kJ/m²	ISO 179/1eA
Thermal properties	dry / cond		
Melting temperature (10°C/min)	295 / *	°C	ISO 11357-1/-3
Coeff. of linear therm. expansion (parallel)	0.8 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.7 / *	E-4/°C	ISO 11359-1/-2
Other properties	dry / cond		
Humidity absorption	3.2 / *	%	Sim. to ISO 62
Density	1180 / -	kg/m³	ISO 1183

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