

# Stanyl® 46HF5040

## Property Data

### PA46-GF40 FR(17)

40% Glass Reinforced, Heat Stabilized, Flame Retardant, High Flow

Properties	Typical Data	Unit	Test Method
<b>RHEOLOGICAL PROPERTIES</b>			
	dry / cond		
Molding shrinkage [parallel]	<b>0.3 / *</b>	%	Sim. to ISO 294-4
Molding shrinkage [normal]	<b>0.9 / *</b>	%	Sim. to ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
	dry / cond		
Tensile modulus	<b>15000 / 12000</b>	MPa	ISO 527-1/-2
Tensile modulus (120°C)	<b>9500</b>	MPa	ISO 527-1/-2
Tensile modulus (160°C)	<b>6500</b>	MPa	ISO 527-1/-2
Stress at break	<b>190 / 130</b>	MPa	ISO 527-1/-2
Stress at break (120°C)	<b>100</b>	MPa	ISO 527-1/-2
Stress at break (160°C)	<b>85</b>	MPa	ISO 527-1/-2
Strain at break	<b>1.7 / 2.5</b>	%	ISO 527-1/-2
Strain at break (120°C)	<b>3</b>	%	ISO 527-1/-2
Strain at break (160°C)	<b>3</b>	%	ISO 527-1/-2
Flexural modulus	<b>13000 / 11000</b>	MPa	ISO 178
Flexural modulus (120°C)	<b>8500</b>	MPa	ISO 178
Flexural modulus (160°C)	<b>5500</b>	MPa	ISO 178
Charpy impact strength (+23°C)	<b>50 / 50</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>40 / 40</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>13 / 14</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>14 / 14</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength (23°C)	<b>15 / 15</b>	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength (-40°C)	<b>15 / 15</b>	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL PROPERTIES</b>			
	dry / cond		
Melting temperature (10°C/min)	<b>295 / *</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>290 / *</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>0.2 / *</b>	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>0.45 / *</b>	E-4/°C	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	<b>V-0 / *</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5 / *</b>	mm	IEC 60695-11-10
UL recognition	<b>UL / *</b>	-	-
Burning Behav. at thickness h	<b>V-0 / *</b>	class	IEC 60695-11-10
Thickness tested	<b>0.25 / *</b>	mm	IEC 60695-11-10
UL recognition	<b>UL / *</b>	-	-
Relative Temperature Index - electrical	<b>140</b>	°C	UL746B
RTI electrical (Thickness (1) tested)	<b>1.5</b>	mm	UL746B
Thermal Index 5000 hrs	<b>163</b>	°C	IEC 60216/ISO 527-1/-2
<b>ELECTRICAL PROPERTIES</b>			
	dry / cond		
Volume resistivity	<b>&gt;1E13 / 1E8</b>	Ohm*m	IEC 60093

12.03.2008

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Electric strength	<b>30 / 20</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>325 / -</b>	-	IEC 60112

## OTHER PROPERTIES

dry / cond

Humidity absorption	<b>1.4 / *</b>	%	Sim. to ISO 62
Density	<b>1770 / -</b>	kg/m <sup>3</sup>	ISO 1183

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