Celanese
The chemistry inside innovation™

NILAMID XT1 HH GF35 BK 9005/C - PPA

Description

PPA, 35% glass fiber reinforced, high heat & hydrolysis stability, high rigidity and creep resistance
NILAMID XT1 compounds are designed for engineering applications requiring a maximum service temperature higher than that of standard polyamides. The most relevant characteristics are the following: High stiffness and strength at elevated temperatures Excellent creep behavior Small influence on mechanical properties after moisture uptake Good dimensional stability Low warpage

Physical properties	dry / cond	Unit	Test Standard
Density	**1480** / **-**	kg/m³	ISO 1183
Molding shrinkage, parallel	**0.1 - 0.3**	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.5 - 0.7**	%	ISO 294-4, 2577
Humidity absorption, 23°C/50%RH	**0.2** / *	%	ISO 62

Mechanical properties	dry / cond	Unit	Test Standard
Tensile modulus	**13000** / **-**	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	**210** / **-**	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	**2** / **-**	%	ISO 527-2/1A
Flexural modulus, 23°C	**12000** / **-**	MPa	ISO 178
Flexural stress at max. force	**340** / **-**	MPa	ISO 178
Charpy impact strength, 23°C	**60** / **-**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**55** / **-**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	**8** / **-**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**6.5** / **-**	kJ/m²	ISO 179/1eA
Izod impact notched, 23°C	**8.5** / **-**	kJ/m²	ISO 180/1A

Thermal properties	dry / cond	Unit	Test Standard
Melting point, peak	**322**	°C	ISO 3146
DTUL at 1.8 MPa	**270** / *	°C	ISO 75-1, -2
Flammability @3.2mm nom. thickn.	**HB** / *	class	UL 94
Flammability @1.6mm nom. thickn.	**HB** / *	class	UL 94
Flammability @0.8mm nom. thickn.	**HB** / *	class	UL 94
Flammability @0.4mm nom. thickn.	**HB** / *	class	UL 94
Continuous service temperature	**150** / *	°C	DIN/IEC 60216-1

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	**1E13** / **-**	Ohm*m	IEC 60093
Electric strength	**21** / **-**	kV/mm	IEC 60243-1
Comparative tracking index	**550** / **-**	-	IEC 60112