NORYL® *GFN3*

Europe-Africa-Middle East: COMMERCIAL

Noryl GFN3 is a standard 30 % glass filled material with a HDT/A of 145 °C according to ISO 75

Features

Heat Stabilized

Platable

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	70	mg/1000cy	GE Method
Tensile Stress, break, 5 mm/min	100	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.5	%	ISO 527
Tensile Modulus, 1 mm/min	8000	MPa	ISO 527
Flexural Stress, break, 2 mm/min	125	MPa	ISO 178
Flexural Modulus, 2 mm/min	6000	MPa	ISO 178
Hardness, H358/30	130	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	25	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	25	kJ/m²	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	25	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	25	kJ/m²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.28	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	3.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, approximate maximum	125	°C	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	155	°C	ISO 306
Vicat Softening Temp, Rate B/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/120	155	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	145	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	140	°C	ISO 75/Ae
Relative Temp Index, Elec	50	°C	UL 746B
Relative Temp Index, Mech w/impact	50	°C	UL 746B
Relative Temp Index, Mech w/o impact	50	°C	UL 746B
PHYSICAL			

1) Typical values only. Variations within normal tolerances are possible for variose colours.All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, expect the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose.Not to be used for part or tool design.
3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
4) Own measurement according to UL.

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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
Mold Shrinkage on Tensile Bar, flow (2)	0.1 - 0.3	%	GE Method
Density	1.3	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.2	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 280°C/10.0 kg	7	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	18	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	2.9	-	IEC 60250
Relative Permittivity, 1 MHz	2.9	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.001	-	IEC 60250
Comparative Tracking Index	250	V	IEC 60112
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 850°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	26	%	ISO 4589

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	100 - 120	°C
Drying Time	2 - 4	hrs
Melt Temperature	280 - 300	°C
Nozzle Temperature	280 - 300	°C
Front - Zone 3 Temperature	290 - 310	°C
Middle - Zone 2 Temperature	270 - 290	°C
Rear - Zone 1 Temperature	250 - 270	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	80 - 120	°C

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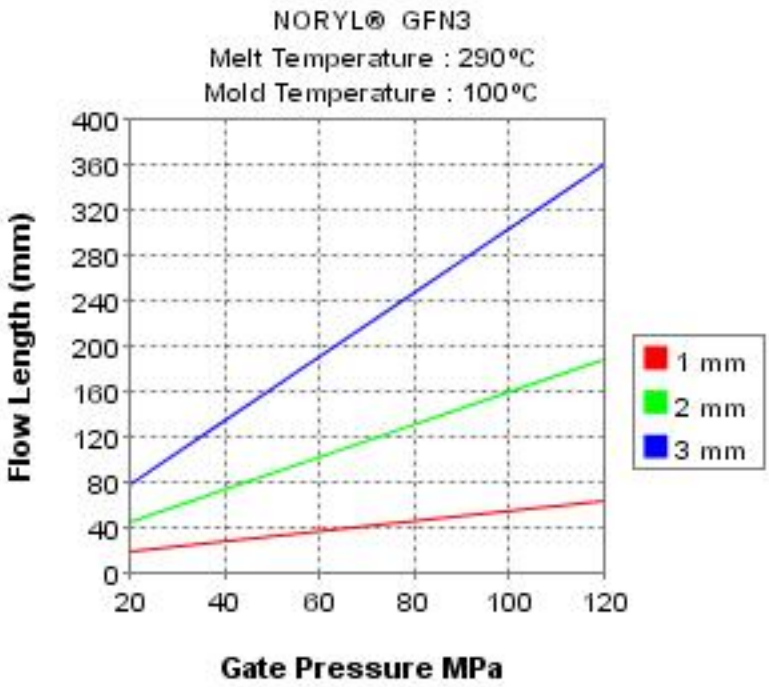
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

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