

Noryl* Resin GFN1740V

Americas: COMMERCIAL

Noryl* GFN1740V Polyphenylene Oxide (PPO) + Polystyrene (PS) resin is a 40 % Glass Reinforced, injection moldable grade with improved hydrolytic stability and with a Tensile Modulus > 11000 MPa; this grade has been developed for fluid engineering applications where higher static stiffness is required. Noryl* GFN1740V has been certified for potable water applications up to 85C in Europe and North America in limited colours.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	165	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	165	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	1.8	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	13800	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	225	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	11700	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	155	MPa	ISO 527
Tensile Stress, break, 5 mm/min	155	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.8	%	ISO 527
Tensile Strain, break, 5 mm/min	1.8	%	ISO 527
Tensile Modulus, 1 mm/min	11300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	195	MPa	ISO 178
Flexural Modulus, 2 mm/min	9500	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	108	J/m	ASTM D 256
Izod Impact, notched, -30°C	90	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	18	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	30	kJ/m ²	ISO 180/1U
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m ²	ISO 179/1eU
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	151	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	148	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	152	°C	ISO 306
Vicat Softening Temp, Rate B/120	161	°C	ISO 306
HDT/af, 1.8 MPa Flatw 80*10*4 sp=64mm	147	°C	ISO 75/af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.4	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.1 - 0.3	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	10	g/10 min	ASTM D 1238
Density	1.4	g/cm ³	ISO 1183

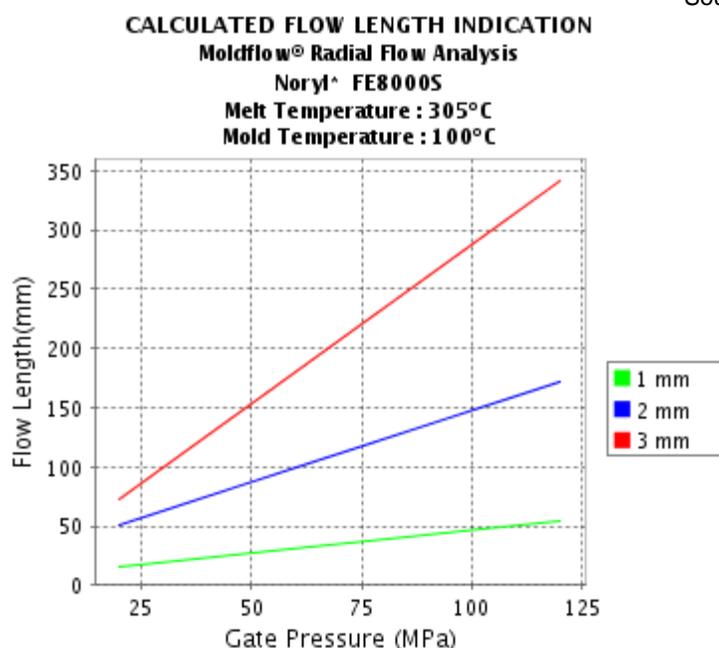
Water Absorption, (23°C/sat)	0.2	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 300°C/10.0 kg	20	cm ³ /10 min	ISO 1133

Source GMD, last updated:06/06/2007

Processing

Parameter	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

Source GMD, last updated:06/06/2007



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.
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THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.

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