



NORYL™ Resin FE1740PW

Americas: COMMERCIAL

Noryl™ FE1740PW 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™ FE1740PW has been certified for potable water applications up to 85C in Europe and North America in limited colours.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	1680	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	140700	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2290	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	119300	kgf/cm ²	ASTM D 790
Tensile Stress, break, 5 mm/min	155	MPa	ISO 527
Tensile Strain, break, 5 mm/min	1.8	%	ISO 527
Tensile Modulus, 1 mm/min	11300	MPa	ISO 527
Flexural Stress, break, 2 mm/min	195	MPa	ISO 178
Flexural Modulus, 2 mm/min	9500	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	11	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	9	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	183	cm-kgf	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			
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	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



NORYL™ Resin FE1740PW

Americas: COMMERCIAL

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
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			
Specific Gravity	1.4	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.09 - 0.15	%	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



NORYL™ Resin FE1740PW

Americas: COMMERCIAL

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	100 - 120	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
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