



NORYL™ Resin FE1630PW

Americas: COMMERCIAL

Noryl™ FE1630PW Polyphenylene Oxide (PPO) + Polystyrene (PS) resin is a 30 % Glass Reinforced, injection moldable grade with improved hydrolytic stability; this grade has been developed for fluid engineering applications. Noryl™ FE1630PW 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	1360	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D 638
Tensile Modulus, 5 mm/min	97600	kgf/cm ²	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	79100	kgf/cm ²	ASTM D 790
Taber Abrasion, CS-17, 1 kg	65	mg/1000cy	SABIC Method
Tensile Stress, break, 5 mm/min	133	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	9600	MPa	ISO 527
Flexural Stress, break, 2 mm/min	192	MPa	ISO 178
Flexural Modulus, 2 mm/min	8120	MPa	ISO 178
Hardness, H358/30	240	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched, 23°C	51	cm-kgf/cm	ASTM D 4812
Izod Impact, unnotched, -30°C	47	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	8	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	7	cm-kgf/cm	ASTM D 256
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
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m ²	ISO 179/1eA



NORYL™ Resin FE1630PW

Americas: COMMERCIAL

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
IMPACT			
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m ²	ISO 179/1eU
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	145	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.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 A/50	165	°C	ISO 306
Vicat Softening Temp, Rate B/50	154	°C	ISO 306
Vicat Softening Temp, Rate B/120	158	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	150	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	145	°C	ISO 75/Ae
PHYSICAL			
Mold Shrinkage, flow, 3.2 mm (5)	0.1 - 0.3	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.2 - 0.5	%	SABIC Method
Melt Flow Rate, 300°C/5.0 kgf	9	g/10 min	ASTM D 1238
Density	1.3	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	30	cm ³ /10 min	ISO 1133



NORYL™ Resin FE1630PW

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