

# NORYL™ RESIN FE1630PW

REGION ASIA

## DESCRIPTION

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 PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, brk, Type I, 5 mm/min	134	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.4	%	ASTM D 638
Tensile Modulus, 5 mm/min	9570	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	7760	MPa	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
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	505	J/m	ASTM D 4812
Izod Impact, unnotched, -30°C	465	J/m	ASTM D 4812
Izod Impact, notched, 23°C	85	J/m	ASTM D 256
Izod Impact, notched, -30°C	75	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	30	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	10	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	30	kJ/m <sup>2</sup>	ISO 179/1eU
<b>THERMAL</b>			
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
<b>PHYSICAL</b>			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Mold Shrinkage, flow, 3.2 mm	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	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 <sup>3</sup>	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 <sup>3</sup> /10 min	ISO 1133
<b>INJECTION MOLDING <sup>(1)</sup></b>			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 320	°C	
Nozzle Temperature	290 – 320	°C	
Front - Zone 3 Temperature	300 – 310	°C	
Middle - Zone 2 Temperature	280 – 300	°C	
Rear - Zone 1 Temperature	270 – 280	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	80 – 120	°C	

(1) For detailed processing conditions please contact the SABIC representative.

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