ER006987

REGION EUROPE

DESCRIPTION

NORYL™ ER006987 resin is a 30% glass reinforced blend of impact modified polyphenylene ether (PPE) + polystyrene (PS). This injection moldable material is FC EU, FDA food contact compliant, NSF/ANSI 61, ACS, WRAS, KTW, and W270 listing for global potable water use for specific colors is pending. NORYL ER006987 resin exhibits good fatigue performance, excellent long-term hydrolytic stability, very low moisture absorption, heat / hot water resistance and is an excellent candidate for a variety of water management applications such as pump housings, impellers, shower/faucet, membrane housings and valves.

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	131	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.0	%	ASTM D 638
Tensile Modulus, 5 mm/min	9425	MPa	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	7650	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	188	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min [1]	131	MPa	ISO 527
Tensile Strain, break, 5 mm/min [1]	2.4	%	ISO 527
Tensile Modulus, 1 mm/min [1]	9475	MPa	ISO 527
Flexural Stress, break, 2 mm/min	200	MPa	ISO 178
Flexural Modulus, 2 mm/min	8440	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	520	J/m	ASTM D 4812
Izod Impact, unnotched, -30°C	550	J/m	ASTM D 4812
Izod Impact, notched, 23°C	105	J/m	ASTM D 256
Izod Impact, notched, -30°C	85	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	9	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	45	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	50	kJ/m²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	12	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate A/50	164	°C	ISO 306
Vicat Softening Temp, Rate B/50	154	°C	ISO 306
Vicat Softening Temp, Rate A/120	167	°C	ISO 306
Vicat Softening Temp, Rate B/120	156	°C	ISO 306

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	155	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	149	°C	ISO 75/Ae
HDT, 0.45 MPa, 3.2 mm, unannealed	153	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	147	°C	ASTM D 648
PHYSICAL			
Density	1.3	g/cm³	ISO 1183
Melt Volume Rate, MVR at 300°C/10.0 kg	26	cm³/10 min	ISO 1133
Melt Flow Rate, 300°C/10 kgf	30	g/10 min	ASTM D 1238
FLAME CHARACTERISTICS (2)			
Glow Wire Ignitability Temperature, 1.5 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	800	°C	IEC 60695-2-13
Glow Wire Flammability Index, 1.5 mm	825	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0 mm	775	°C	IEC 60695-2-12
INJECTION MOLDING (3)			
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) Single-gated data for double gate property, please contact SABIC representative

(2) Glow wire tested internally at SABIC

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

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