NORYL™ RESIN 731S

REGION ASIA

DESCRIPTION

NORYL™ 731S resin is a non-reinforced blend of Polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade has been listed for potable water applications up to 85C by the UK WFBS* according to BS 6920 and is NSF/ANSI 61* listed for potable water use (in limited colors). NORYL 731S resin exhibits good surface appearance, high ductility, and good impact resistance along with low moisture absorption, creep resistance, dimensional stability, and hydrolytic stability. NORYL 731S resin is an excellent candidate for a variety of water management applications such as valves, filtration components, and water meter internals. *NSF certification is color dependent and is listed with 01-01-00 customer specification on the NSF.org website.

TYPICAL PROPERTY VALUES

Revision 20191004

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	30	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2420	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	208	J/m	ASTM D 256
Izod Impact, notched, -40°C	133	J/m	ASTM D 256
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	117	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	126	°C	ASTM D 648
CTE, -40°C to 60°C, flow	1.3E-04	1/°C	ASTM E 831
Relative Temp Index, Elec [1]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	90	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.08	-	ASTM D 792
Water Absorption, 24 hours	0.06	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
ELECTRICAL			
Dissipation Factor, 50/60 Hz	2.65	-	ASTM D 150
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-228540	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Temperature	105 – 110	°C	
Drying Time	2 – 4	hrs	
Drying Time (Cumulative)	8	hrs	
Melt Temperature	280 – 310	°C	
Mold Temperature	70 – 95	°C	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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