NORYL™ RESIN 731S

REGION ASIA

DESCRIPTION

NORYL 731S resin is a non-reinforced blend of Polyphenylene ether (PPE) + polystyrene (PS). This injection moldable resin is FC EU, FDA food contact* compliant and has NSF/ANSI 61, ACS, WRAS, and KTW-WBGL listings for selected colors and manufacturing locations. NORYL 731S resin exhibits good surface appearance, high ductility, low moisture absorption, dimensional 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.

* Restrictions apply in the case of applications involving fatty foods. Please review the food contact declaration for details.

GENERAL INFORMATION	
Features	Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Corrosivity, Low Moisture Absorption, Low Specific Gravity, Food contact, Potable water safe, Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Hygiene and Healthcare	Personal and Professional Hygiene

TYPICAL PROPERTY VALUES

Revision 20241015

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	30	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2420	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	208	J/m	ASTM D256
Izod Impact, notched, -40°C	133	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	117	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	126	°C	ASTM D648
CTE, -40°C to 60°C, flow	1.3E-04	1/°C	ASTM E831
Relative Temp Index, Elec [2]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	90	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	105	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.08	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.06	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [3]	0.5 – 0.7	%	SABIC method

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
ELECTRICAL [1]			
Dissipation Factor, 50/60 Hz	2.65	-	ASTM D150
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 D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-228540	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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