NORYL™ RESIN N1900

REGION ASIA

DESCRIPTION

NORYL N1900 resin is a non-reinforced blend of polyphenylene ether (PPE) + polystyrene (PS). This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VA at 3mm and V0 at 1.5mm along with UL746C Outdoor Suitability rating of F1. NORYL N1900 resin exhibits high impact strength, dimensional stability, hydrolytic stability, and very low moisture absorption. This material is an excellent candidate for a variety of applications such as solar frames, unattended power supply (UPS) inverter/charger, indoor and outdoor electrical enclosures / housings / connectors, and wall plates / sockets / switches. *this grade is also referred to as NORYL N190 in several regions.

GENERAL INFORMATION	
Features	Flame Retardant, Hydrolytic Stability, Low Warpage, Amorphous, Low Shrinkage, Low Moisture Absorption, Low Specific Gravity, Non Cl/Br flame retardant, Non halogenated flame retardant, Dimensional stability
Fillers	Unreinforced
Polymer Types	Polyphenylene Ether + PS (PPE+PS)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood
Electrical and Electronics	Energy Management, Electronic Components
Industrial	Electrical, Defense

TYPICAL PROPERTY VALUES

Revision 20260204

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	40	MPa	SABIC - Japan Method
Tensile Strain, break	76	%	SABIC - Japan Method
Flexural Stress	68	MPa	ASTM D790
Flexural Modulus	2260	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	283	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°C	ASTM D648
CTE, -30°C to 30°C	7.E-05	1/°C	TMA
Relative Temp Index, Elec [2]	95	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	80	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	95	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.08	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.07	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm [3]	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 250°C/10.0 kgf	29.8	g/10 min	ASTM D1238
ELECTRICAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥6	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 2	≥1.5	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥6	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-228562	-	-
UL Yellow Card Link 2	E45587-237048	-	-
UL Recognized, 94-5VA Flame Class Rating	≥2.8	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥0.75	mm	UL 94

(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, colors and regions. 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.

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