NORYL™ Resin N1900 - Europe

(PPE+PS) Saudi Basic Industries Corporation (SABIC)

Product Texts

NORYL™ N1900 resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). 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.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**8**	cm³/10min	ISO 1133
Temperature	**280**	°C	-
Load	**2.16**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2300**	MPa	ISO 527
Yield stress	**50**	MPa	ISO 527
Yield strain	**3**	%	ISO 527
Stress at break	**40**	MPa	ISO 527
Strain at break	**20**	%	ISO 527
Flexural modulus	**2200**	MPa	ISO 178
Charpy notched impact strength, +23°C	**10**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**5**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	**10**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	**6**	kJ/m²	ISO 180/1A
Ball indentation hardness	**87**	MPa	ISO 2039-1

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, A	**110**	°C	ISO 306
Vicat softening temperature, B	**95**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**105**	°C	ISO 306
Thermal Conductivity	**0.25**	W/(m K)	DIN 52616

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	**2.6**	-	IEC 62631-2-1
Dissipation factor, 1MHz	**9**	E-4	IEC 62631-2-1
Volume resistivity	**1E13**	Ohm*m	IEC 62631-3-1
Surface resistivity	**>1E15**	Ohm	IEC 62631-3-2

Other properties	Value	Unit	Test Standard
Water absorption	**0.32**	%	Sim. to ISO 62
Humidity absorption	**0.06**	%	Sim. to ISO 62
Density	**1100**	kg/m³	ISO 1183

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**80 - 100**	°C	-
Pre-drying - Time	**2 - 3**	h	-
Melt temperature	**260 - 280**	°C	-
Mold temperature	**60 - 80**	°C	-
Feed temperature	**60 - 80**	°C	-
Zone 1	**220 - 240**	°C	-
Zone 2	**240 - 260**	°C	-
Zone 3	**260 - 280**	°C	-

Characteristics

Processing
Injection Molding

Additives
Flame retarding agent

Special Characteristics
Flame retardant

Chemical Resistance
Hydrolytically Stable

Applications
Automotive

Regional Availability
Europe