

Product Texts

NORYL GTX™ 678 resin is a conductive, high performance non-reinforced alloy of Polyphenylene Ether (PPE) + Polyamide (PA). This injection moldable grade is optimized for primer-less electrostatic and powder coat painting, and it is UL 5VA rated with a non-brominated, non-chlorinated FR package. NORYL GTX678 resin exhibits an excellent balance of conductivity, high heat resistance, good ductility, and is heat stabilized. This material is an excellent candidate for non-automotive painted applications such as office furniture, PVC/metal replacement, lighting ballast housings / enclosures, and appliance exteriors.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	7	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	5	kg	-
Density of melt	992	kg/m ³	-
Thermal conductivity of melt	0.2	W/(m K)	-
Spec. heat capacity of melt	1960	J/(kg K)	-
Ejection temperature	145	°C	-
ASTM Data			
Melt Flow Index, MFI	7.8	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2900	MPa	ISO 527
Yield stress	58	MPa	ISO 527
Yield strain	7	%	ISO 527
Stress at break	52	MPa	ISO 527
Strain at break	12	%	ISO 527
Flexural modulus	2600	MPa	ISO 178
Charpy notched impact strength, +23°C	12	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	10	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	7	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2900	MPa	ASTM D 638
Tensile Strength at Yield	58	MPa	ASTM D 638
Tensile Strength at Break	52	MPa	ASTM D 638
Elongation at Yield	7	%	ASTM D 638
Elongation at Break	12	%	ASTM D 638
Flexural Modulus	2600	MPa	ASTM D 790
Izod Impact notched, 1/8 in	100	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	70	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 0.45 MPa	191	°C	ISO 75-1/-2
Vicat softening temperature, B	197	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	195	°C	ISO 306
Coeff. of linear therm. expansion, parallel	83	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	85	E-6/K	ISO 11359-1/-2
ASTM Data			
DTUL @ 66 psi	195	°C	ASTM D 648
Vicat Temperature	198	°C	ASTM D 1525
Thermal Conductivity, solid state	0.0288	W/(m K)	ASTM C 177
Specific Heat	1400	J/(kg K)	ASTM C 351

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Volume Resistivity	4000	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Water absorption	4	%	Sim. to ISO 62
Humidity absorption	0.5	%	Sim. to ISO 62
Density	1120	kg/m ³	ISO 1183
Density	1120	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	95 - 105	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.07	%	-
Melt temperature	275 - 300	°C	-
Mold temperature	65 - 95	°C	-
Zone 1	260 - 300	°C	-
Zone 2	265 - 300	°C	-
Zone 3	270 - 300	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	0.3 - 1.4	MPa	-

Characteristics

Processing

Injection Molding

Regional Availability

Asia Pacific