

Product Texts

NORYL™ FP5140 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 with a UL94 flame rating of V1 at 1.5mm NORYL FP5140 resin was designed to have very good dimensional stability with high flow and exhibits good rheological properties, high heat resistance, hydrolysis resistance, and very low density. The combination of these properties makes this material an excellent candidate for Flat Panel TV enclosure applications.

UL Yellow Card Link [E45329-644141](https://www.ul.com/yellow-card/E45329-644141)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	44	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	2.16	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2450	MPa	ISO 527
Yield stress	58	MPa	ISO 527
Yield strain	3.5	%	ISO 527
Stress at break	48	MPa	ISO 527
Strain at break	7	%	ISO 527
Flexural modulus	2300	MPa	ISO 178
Charpy notched impact strength, +23°C	5	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	6	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	4	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2940	MPa	ASTM D 638

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	85	°C	ISO 75-1/-2
Vicat softening temperature, B	105	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	110	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	V-1	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Burning behav. at thickness h	V-2	class	IEC 60695-11-10
Thickness tested	1.0	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature (GWIT)	700	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	725	°C	IEC 60695-2-13
GWIT - thickness tested (2)	2	mm	-
Glow Wire Ignition Temperature (GWIT)	725	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-
ASTM Data			
DTUL @ 264 psi	81	°C	ASTM D 648
Vicat Temperature	103	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 1MHz	2.8	-	IEC 62631-2-1
Dissipation factor, 1MHz	20	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Comparative tracking index	250	-	IEC 60112
ASTM Data			
Dissipation Factor, 1 MHz	0.002	-	ASTM D 150

NORYL™ Resin FP5140 - Europe
(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

Dielectric Constant, 1 MHz	3	-	ASTM D 150
Surface Resistivity	8.5E13	Ohm	ASTM D 257
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Water absorption	0.18	%	Sim. to ISO 62
Humidity absorption	0.05	%	Sim. to ISO 62
Density	1110	kg/m ³	ISO 1183
Density	1110	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	70 - 80	°C	-
Pre-drying - Time	2 - 3	h	-
Melt temperature	250 - 285	°C	-
Mold temperature	40 - 65	°C	-
Feed temperature	60 - 80	°C	-
Zone 1	200 - 220	°C	-
Zone 2	230 - 260	°C	-
Zone 3	250 - 285	°C	-

Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant

Additives

Flame retarding agent

Regional Availability

Europe