

NORYL™ FP3060 resin

Polyphenylene Ether + PS

SABIC Innovative Plastics Europe

Message:

NORYL FP3060 is an unfilled, injection moldable modified polyphenylene ether resin. Designed for good dimensional stability and high flow, this resin also uses non-chlorinated, non-brominated FR additives to achieve a V1 UL94 rating at 1.5 mm and V0@ 2.5mm with a specific density of 1.1 g/cm³. NORYL FP3060 may be an excellent material candidate for Flat Panel TV enclosure applications requiring good rheological properties, heat resistance, hydrolysis resistance, low density and thin wall flame resistance.

General Information			
UL YellowCard	E45329-100064745		
Additive	Flame Retardant		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Dimensional Stability		
	High Flow		
	High Heat Resistance		
	Hydrolysis Resistant		
	Low Density		
Uses	Television Housings		
	Thin-walled Parts		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.10	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/3.8 kg)	42	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR)			ISO 1133
280°C/1.2 kg	20.0	cm³/10min	
280°C/2.16 kg	41.0	cm³/10min	
Water Absorption			ISO 62
Saturation, 23°C	0.13	%	
Equilibrium, 23°C, 50% RH	0.020	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2200	MPa	ASTM D638
--	2420	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	54.0	MPa	ASTM D638

Yield	55.0	MPa	ISO 527-2/50
Break ³	55.0	MPa	ASTM D638
Break	42.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/50
Break ⁵	12	%	ASTM D638
Break	11	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2400	MPa	ASTM D790
-- ⁷	2530	MPa	ISO 178
Flexural Stress			
--	82.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	84.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	6.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
23°C	78	J/m	ASTM D256
-30°C ¹⁰	5.0	kJ/m ²	ISO 180/1A
23°C ¹¹	6.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	80.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	74.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	105	°C	ASTM D1525 ¹³
--	91.0	°C	ISO 306/B50
--	93.0	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	8.3E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.0E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.50 mm, Testing by SABIC	V-1		
2.50 mm, Testing by SABIC	V-0		
Injection	Nominal Value	Unit	
Drying Temperature	65.0 to 75.0	°C	
Drying Time	2.0 to 3.0	hr	
Hopper Temperature	60.0 to 80.0	°C	
Rear Temperature	200 to 220	°C	
Middle Temperature	230 to 260	°C	
Front Temperature	250 to 285	°C	

Nozzle Temperature	240 to 270	°C
Processing (Melt) Temp	250 to 285	°C
Mold Temperature	40.0 to 65.0	°C

NOTE

1.	50 mm/min
2.	Type I, 50 mm/min
3.	Type I, 50 mm/min
4.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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