Technical Data Sheet

Polyflam HSF 36

General Purpose Polystyrene
LyondellBasell Industries
Engineering Plastics

Product Description	
High impact flame-retardant PS grade; without PBDE	
General	
Features	• Flame Retardant
UL File Number	• E86615
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.18 g/cm³	1.18 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (200°c/5.0 Kg)	5.0 cm³/10min	5.0 cm³/10min	ISO 1133
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus	305000 psi	2100 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	3630 psi	25.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	2.0 %	2.0 %	ISO 527-2/1A/50
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°f (-30°c)	0.95 ft·lb/in²	2.0 kJ/m²	
73°f (23°c)	4.8 ft·lb/in²	10 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°f (-30°c)	19 ft·lb/in²	40 kJ/m²	
73°f (23°c)	38 ft·lb/in²	80 kJ/m²	
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	187 °F	86.0 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	167 °F	75.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	187 °F	86.0 °C	ISO 306/B50
--	212 °F	100 °C	ISO 306/A50
Ball Pressure Test (176°f (80°c))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
0.06 In (1.5 Mm)	122 °F	50.0 °C	
0.12 In (3.0 Mm)	122 °F	50.0 °C	
RTI Imp			UL 746B
0.06 In (1.5 Mm)	122 °F	50.0 °C	
0.12 In (3.0 Mm)	122 °F	50.0 °C	
RTI Str			UL 746B
0.06 In (1.5 Mm)	122 °F	50.0 °C	
0.12 In (3.0 Mm)	122 °F	50.0 °C	
Electrical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	350 V	350 V	IEC 60112
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Burning Rate			
0.0787 In (2.00 Mm), Self-extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
0.0787 In (2.00 Mm), Self-extinguishing	0.0 in/min	0.0 mm/min	ISO 3795

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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94 IEC 60695-11-10, -20
0.06 In (1.5 Mm)	V-0	V-0	
0.12 In (3.0 Mm)	• V-0 • 5VA	• V-0 • 5VA	
0.15 In (3.9 Mm)	• V-0 • 5VA	• V-0 • 5VA	
0.08 In (2.0 Mm)	5VB	5VB	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 In (1.5 Mm)	1760 °F	960 °C	
0.12 In (3.0 Mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 In (1.5 Mm)	1200 °F	650 °C	
0.12 In (3.0 Mm)	1160 °F	625 °C	
Oxygen Index	26 %	26 %	ISO 4589-2

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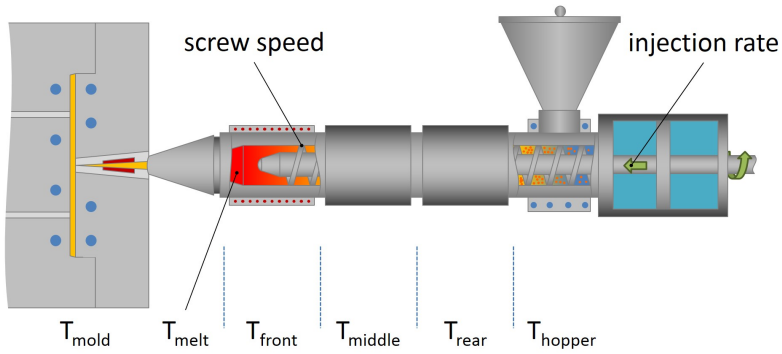

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	158 to 176 °F	70 to 80 °C
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr
Processing (Melt) Temp	374 to 428 °F	190 to 220 °C
Mold Temperature	86 to 140 °F	30 to 60 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back Pressure	725 to 1450 psi	5.00 to 10.0 MPa
Screw Speed	< 709 in/min	< 18 m/min
Injection Notes		
Mould surface contacting melt should be of non-corrosive steel (content of chrome > 12%)		

Notes

These are typical property values not to be construed as specification limits.