

Technical Data Sheet

Polyflam RABS 90000 UV5

Acrylonitrile Butadiene Styrene
LyondellBasell Industries
Engineering Plastics

Product Description

Flame retardant ABS standard grade without PBDE and higher thermal stability

General

Features	- Flame Retardant - Good Processability	- Good Thermal Stability - Non-Blooming
UL File Number	E86615	
Processing Method	Injection Molding	
Part Marking Code (ISO 11469)	ABS FR17	
Resin ID (ISO 1043)	ABS FR17	

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (220 °C/10.0 Kg)	30 cm ³ /10min	30 cm ³ /10min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	319000 psi	2200 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	5800 psi	40.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	3.0 %	3.0 %	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)	2.4 ft·lb/in ²	5.0 kJ/m ²	
73 °F (23 °C)	4.8 ft·lb/in ²	10 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22 °F (-30 °C)	21 ft·lb/in ²	45 kJ/m ²	
73 °F (23 °C)	38 ft·lb/in ²	80 kJ/m ²	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness	16400 psi	113 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	198 °F	92.0 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	176 °F	80.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	205 °F	96.0 °C	ISO 306/B50
--	221 °F	105 °C	ISO 306/A50
Ball Pressure Test (194 °F (90 °C))	Pass	Pass	IEC 60695-10-2
RTI Elec			UL 746B
0.06 In (1.5 Mm)	140 °F	60.0 °C	
0.12 In (3.0 Mm)	140 °F	60.0 °C	
RTI Imp			UL 746B
0.06 In (1.5 Mm)	140 °F	60.0 °C	
0.12 In (3.0 Mm)	140 °F	60.0 °C	
RTI Str			UL 746B
0.06 In (1.5 Mm)	140 °F	60.0 °C	
0.12 In (3.0 Mm)	140 °F	60.0 °C	

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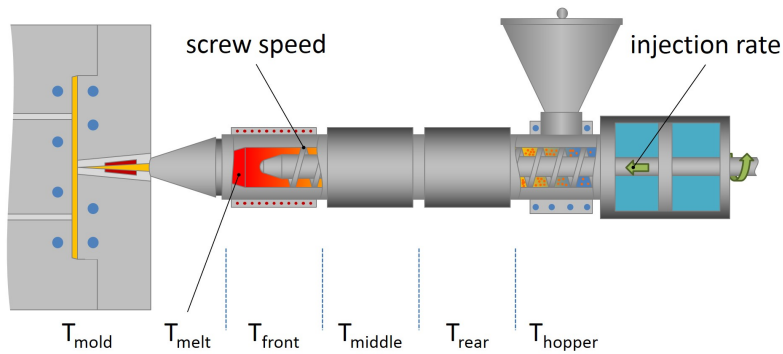
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Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	475 V	475 V	IEC 60112
High Amp Arc Ignition (HAI)			UL 746A
0.06 In (1.5 Mm)	PLC 3	PLC 3	
0.12 In (3.0 Mm)	PLC 3	PLC 3	
Hot-wire Ignition (HWI)			UL 746A
0.06 In (1.5 Mm)	PLC 3	PLC 3	
0.12 In (3.0 Mm)	PLC 0	PLC 0	
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	ISO 3795
0.0787 In (2.00 Mm), Self-extinguishing	0.0 in/min	0.0 mm/min	FMVSS 302
Flame Rating			UL 94
0.06 In (1.5 Mm)	V-0	V-0	IEC 60695-11-10, -20
0.12 In (3.0 Mm)	V-0	V-0	
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)	1340 °F	725 °C	
0.12 In (3.0 Mm)	1340 °F	725 °C	
Oxygen Index	28 %	28 %	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	428 to 464 °F	220 to 240 °C
Mold Temperature	104 to 140 °F	40 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.