

Technical Data Sheet

# Polyflam RABS 3000

Acrylonitrile Butadiene Styrene  
LyondellBasell Industries  
Engineering Plastics

**Product Description**

Flame retardant ABS standard grade without PBDE and higher stability

**General**

Features	• Flame Retardant
UL File Number	• E86615
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• ABS FR(17)

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
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Density	1.17 g/cm <sup>3</sup>	1.17 g/cm <sup>3</sup>	ISO 1183/A
Melt Volume-Flow Rate (MVR) (220°C/10.0 Kg)	30 cm <sup>3</sup> /10min	30 cm <sup>3</sup> /10min	ISO 1133

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
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Tensile Modulus	363000 psi	2500 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	6670 psi	46.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	2.7 %	2.7 %	ISO 527-2/1A/50
Flexural Modulus <sup>1</sup>	363000 psi	2500 MPa	ISO 178
Flexural Stress <sup>1</sup>			ISO 178
4.5% Strain	10400 psi	72.0 MPa	
3.5% Strain	10200 psi	70.0 MPa	

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
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Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	2.4 ft·lb/in <sup>2</sup>	5.0 kJ/m <sup>2</sup>	
73°F (23°C)	4.8 ft·lb/in <sup>2</sup>	10 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	21 ft·lb/in <sup>2</sup>	45 kJ/m <sup>2</sup>	
73°F (23°C)	43 ft·lb/in <sup>2</sup>	90 kJ/m <sup>2</sup>	

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
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Deflection Temperature Under Load			
66 Psi (0.45 Mpa), Unannealed	192 °F	89.0 °C	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	181 °F	83.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	201 °F	94.0 °C	ISO 306/B50
--	223 °F	106 °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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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
High Amp Arc Ignition (HAI)			UL 746A
0.06 In (1.5 Mm)	PLC 0	PLC 0	
0.12 In (3.0 Mm)	PLC 0	PLC 0	
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			
0.06 In (1.5 Mm)	V-0	V-0	UL 94 IEC 60695-11-10, -20
0.12 In (3.0 Mm)	V-0	V-0	UL 94
0.13 In (3.2 Mm)	V-0	V-0	IEC 60695-11-10, -20
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)	1290 °F	700 °C	
0.12 In (3.0 Mm)	1290 °F	700 °C	

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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**

<sup>1</sup> 0.079 in/min (2.0 mm/min)

**Notes**

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