

Polyflam SDR 5005 NAT

LyondellBasell Industries - General Purpose Polystyrene

General Information

Product Description

Flame retardant PS standard grade, without PBDE and HBCD, free of antimony

General

Additive	• Flame Retardant
Features	• Antimony Free • Flame Retardant
Processing Method	• Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.06	g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	13	cm ³ /10min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	370000	psi	ISO 527-1/1A/1
Tensile Stress (Yield)	4790	psi	ISO 527-2/1A/50
Tensile Stress (Break)	3920	psi	ISO 527-2/50
Tensile Strain (Yield)	1.6	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	35	%	ISO 527-2/50
Flexural Modulus ²	392000	psi	ISO 178
Flexural Stress ²			ISO 178
5.3% Strain	7250	psi	
3.5% Strain	7110	psi	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.4	ft·lb/in ²	
73°F	3.3	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	29	ft·lb/in ²	
73°F	33	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	174	°F	ISO 75-2/Bf
Deflection Temperature Under Load 264 psi, Unannealed	163	°F	ISO 75-2/Af
Vicat Softening Temperature			
--	185	°F	ISO 306/B50
--	198	°F	ISO 306/A50
RTI Elec			UL 746B
0.06 in	122	°F	
0.12 in	122	°F	
RTI Imp			UL 746B
0.06 in	122	°F	
0.12 in	122	°F	

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Thermal	Nominal Value	Unit	Test Method
RTI Str			UL 746B
0.06 in	122	°F	
0.12 in	122	°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+13	ohms·m	IEC 62631-3-1
Comparative Tracking Index	375	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Burning Rate ³			
0.0787 in	0.0	in/min	FMVSS 302
0.0787 in	0.0	in/min	ISO 3795
Flame Rating			UL 94
0.06 in	V-2		
0.12 in	V-2		
Flammability Classification			IEC 60695-11-10, -20
0.06 in	V-2		
0.12 in	V-2		
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in	1760	°F	
0.12 in	1760	°F	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 in	1560	°F	
0.12 in	1250	°F	
Oxygen Index	25	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	158 to 176	°F
Drying Time	2.0 to 4.0	hr
Processing (Melt) Temp	356 to 410	°F
Mold Temperature	86 to 140	°F
Injection Rate	Slow-Moderate	
Back Pressure	725 to 1450	psi
Screw Speed	< 591	in/min

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.079 in/min

³ Self-Extinguishing