

Technical Data Sheet

Polyflam SDR 5005 HP25 WHI84035



Polystyrene, General Purpose

Product Description

Polystyrene flame-retardant, without PBDE, without HBCD

Processing Method Injection Molding

Resin ID PS HI FR(16)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (200 °C/5.0 kg)	15	cm ³ /10 min	ISO 1133
Density, (Method A)	1.13	g/cm ³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	33.0	MPa	ISO 527-2
Nominal Tensile Strain at Break, (50 mm/min)	20	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	2800	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	1.6	%	ISO 527-2
Tensile Stress at Break, (Type 1A, 50 mm/min)	28.0	MPa	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	2600	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	53.0	MPa	ISO 178
(2.0 mm/min, 5.5%)	54.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched, (23 °C, Type 1, Edgewise, Notch A)	5.3	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched, (23 °C, Type 1, Edgewise)	65	kJ/m ²	ISO 179
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	86.0	°C	ISO 306
(A (10N), 50 °C/h)	92.0	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	83.0	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	64.0	°C	ISO 75-2/A
Flammable			
Glow Wire Flammability Index			
(0.75 mm)	750	°C	IEC 60695-2-12
(1.5 mm)	750	°C	IEC 60695-2-12
(3.0 mm)	750	°C	IEC 60695-2-12

UL Information

Flame Rating		
(1.6 mm)	V-2	UL 94
(3.2 mm)	V-2	UL 94
(0.8 mm)	V-2	UL 94
Flammability Classification		
(0.8 mm)	V-2	IEC 60695-11-10, -20
(1.6 mm)	V-2	IEC 60695-11-10, -20
(3.2 mm)	V-2	IEC 60695-11-10, -20

Injection Parameters	Nominal	
	Value	Units
Drying Time	2.0 to 4.0	hr
Drying Temperature	70 to 80	°C
Screw Speed	<250	mm/sec
Processing (Melt) Temp	190 to 210	°C
Injection Rate	Slow-Moderate	
Back Pressure	5.00 to 10.0	MPa
Mold Temperature	30 to 60	°C