

Technical Data Sheet

Polyflam SDR 5005 HP25 WHI88315



Polystyrene, General Purpose

Product Description

non reinforced flame-retardant PS, mixing grade. Data are based on 100% compound.

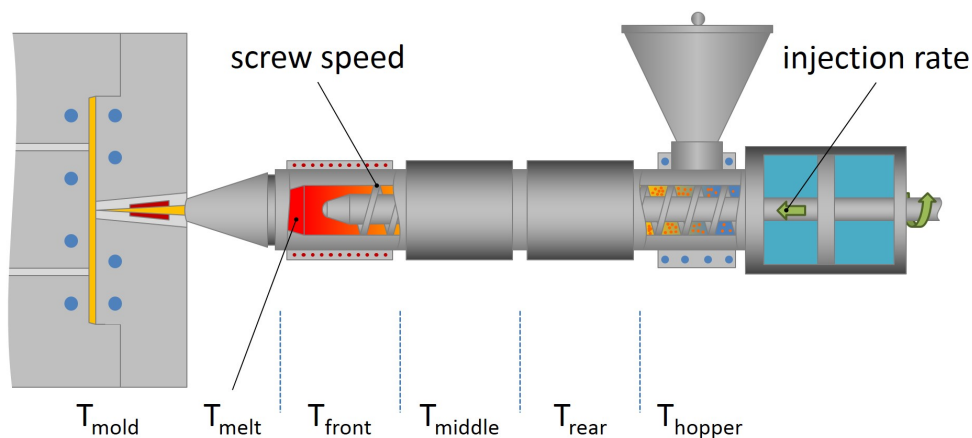
Regulatory Status

For regulatory compliance information, see *Polyflam SDR 5005 HP25 WHI88315* [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	Asia-Pacific; Europe; Latin America; North America
Processing Method	Injection Molding
Resin ID	PSHI (FR 16)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Volume Flow Rate, (200 °C/5.0 kg)	35	cm ³ /10 min	ISO 1133
Density, (Method A)	1.19	g/cm ³	ISO 1183
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	30.0	MPa	ISO 527-2
Nominal Tensile Strain at Break, (50 mm/min)	15	%	ISO 527-2
Flexural Modulus, (2.0 mm/min)	2700	MPa	ISO 178
Tensile Strain at Yield, (Type 1A, 50 mm/min)	2.0	%	ISO 527-2
Tensile Stress at Break, (Type 1A, 50 mm/min)	25.0	MPa	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	2500	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	50.0	MPa	ISO 178
(2.0 mm/min, 4.3%)	50.0	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	6.0	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	2.0	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	50	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise)	45	kJ/m ²	ISO 179
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	77.0	°C	ISO 306
(A (10N), 50 °C/h)	85.0	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	73.0	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	67.0	°C	ISO 75-2/A
Flammable			

Glow Wire Flammability Index			
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°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

Notes

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

Processing notes

Melt contacting surfaces should be made of a high quality, corrosive resistant steel. Positive experiences have been made with steel qualities containing > 12% chromium.

Avoid processing at very barrel high temperatures or above the recommended melt temperature range as this can increase risk of deposit onto the tool surfaces. Avoid long residence times. At start and end of production, it is recommended to purge clean with non-flame retardant polymer or a polyolefin.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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