

POLYFLAM® HSF 33 E

General Purpose Polystyrene

A. Schulman Europe

Message:

Flame-retardant PS grade; without PBDE

General Information			
UL YellowCard	E86615-309763		
Features	Viscosity, High		
	Flame retardancy		
UL File Number	E86615		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.22	g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (200°C/5.0 kg)	2.00	cm ³ /10min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2100	MPa	ISO 527-2/1A/1
Tensile Stress (Yield)	28.0	MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	2.5	%	ISO 527-2/1A/50
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	2.0	kJ/m ²	ISO 179/1eA
23°C	8.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	24	kJ/m ²	ISO 179/1eU
23°C	40	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	88.0	°C	ISO 75-2/Bf
1.8 MPa, not annealed	78.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	104	°C	ISO 306/A50
--	89.0	°C	ISO 306/B50
Ball Pressure Test (80°C)	Pass		IEC 60695-10-2
RTI Elec			UL 746
1.50 mm	50.0	°C	UL 746
3.00 mm	50.0	°C	UL 746
RTI Imp			UL 746

1.50 mm	50.0	°C	UL 746
3.00 mm	50.0	°C	UL 746
RTI			UL 746
1.50 mm	50.0	°C	UL 746
3.00 mm	50.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index	500	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Burning Rate (3.00mm, automatic fire extinguishing)	0.0	mm/min	ISO 3795
Flame Rating			UL 94, IEC 60695-11-10, -20
1.50 mm	V-0		UL 94, IEC 60695-11-10, -20
3.00 mm	V-0		UL 94, IEC 60695-11-10, -20
Glow Wire Flammability Index			IEC 60695-2-12
1.50 mm	960	°C	IEC 60695-2-12
3.00 mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.50 mm	625	°C	IEC 60695-2-13
3.00 mm	625	°C	IEC 60695-2-13
Oxygen Index	27	%	ISO 4589-2
Additional Information			

1.)
Not for use in food contact applications2.)
Not for use in medical or pharmaceutical applications

Injection	Nominal Value	Unit
Drying Temperature	70.0 - 80.0	°C
Drying Time	2.0 - 4.0	hr
Rear Temperature	190	°C
Middle Temperature	200	°C
Front Temperature	210	°C
Nozzle Temperature	220	°C
Processing (Melt) Temp	190 - 220	°C
Mold Temperature	30.0 - 60.0	°C
Injection Pressure	80.0 - 120	MPa
Injection Rate	Slow-Moderate	
Holding Pressure	40.0 - 90.0	MPa
Back Pressure	5.00 - 10.0	MPa
Cushion	< 5.00	mm
Screw Speed		mm/sec

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