SCHULAMID® 6 GF 20 FR GREY 96.7685

Polyamide 6

A. Schulman Europe

Message:

20% glass fibre reinforced flame-retardant Polyamide 6 grade (V-2); halogen free

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PA 6 GF 20 FR(30)		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.34	g/cm³	ISO 1183/A
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	4600	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	60.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	7.0	%	ISO 527-2/1A/5
Flexural Modulus	4000	MPa	ISO 178
Flexural Stress [1]			ISO 178
9.0% strain	95.0	MPa	ISO 178
3.5% strain	100	MPa	ISO 178
6.0% strain	105	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.0	kJ/m²	ISO 179/1eA
23°C	4.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	40	kJ/m²	ISO 179/1eU
23°C	50	kJ/m²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	205	°C	ISO 75-2/Bf
1.8 MPa, not annealed	140	°C	ISO 75-2/Af
Continuous Use Temperature [2]	90.0	°C	
Vicat Softening Temperature			
--	215	°C	ISO 306/A50
--	205	°C	ISO 306/B50
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	35	kV/mm	IEC 60243-1
Comparative Tracking Index	450	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**

Flame Rating			UL 94, IEC 60695-11-10, -20
0.800 mm	V-2		UL 94, IEC 60695-11-10, -20
1.60 mm	V-2		UL 94, IEC 60695-11-10, -20
3.20 mm	V-2		UL 94, IEC 60695-11-10, -20
Glow Wire Flammability Index			IEC 60695-2-12
0.750 mm	960	°C	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
0.750 mm	725	°C	IEC 60695-2-13
1.50 mm	725	°C	IEC 60695-2-13
3.00 mm	725	°C	IEC 60695-2-13

Additional Information

1.) Not for use in food contact applications2.) Not for use in medical or pharmaceutical applicationsCharacteristic propertiesSCHULAMID 6 ... FR is the trade name of the halogen and (red) phosphorous free flame retardant Polyamide 6 grades.

Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	3.0 - 4.0	hr
Suggested Max Moisture	0.040 - 0.10	%
Hopper Temperature	70.0	°C
Rear Temperature	230	°C
Middle Temperature	245	°C
Front Temperature	260	°C
Processing (Melt) Temp	< 260	°C
Mold Temperature	60.0 - 100	°C
Injection Pressure	80.0 - 140	MPa
Injection Rate	Moderate	
Holding Pressure	40.0 - 85.0	MPa
Back Pressure	2.00 - 8.00	MPa
Screw Speed		mm/sec

Injection instructions

PredryingTypically a minimum predrying time of 3 to 4 hours at 80°C is recommended in a dehumidifying dryer. For optimal qualities a humidity of 0,04 - 0,1 % is recommended. Drying over 6 hours duration should occur at 60°C. Should be placed in the hopper.ReprocessingAddition of regrind is not recommended for nylons containing flame retardant.Shut downLong residence time should be avoided. Purge with polyolefin or with base polymer.FinishingThe material is suitable for machining. Varnishing, printing, gluing andembossing can be carried out using commercially available products.ConditioningRecently processed mouldings which not have been conditioned are brittle. The material picks up moisture until the equilibrium moisture content is reached. This may last for over a half year. Then the article has reached his balanced property profile. For accelerated absoption see our separate Technical instruction.RemarksFor permanent processing of glass fibre reinforced grades wear resistant screws and cylinders are recommended.

NOTE

1.	2.0 mm/min
2.	Long periode (20000h)

Recommended distributors for this material

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