Technical Data Sheet

Schulamid 6 GF 30 TC BLACK

Polyamide 6
LyondellBasell Industries
Engineering Plastics

Product Description
30% glass fiber reinforced compound based on Polyamide 6

General			
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Features	• Good Dimensional Stability • Good Flow • Good Processability	• Hydrolysis Resistant • Low Density • Low Gloss	• Low Moisture Absorption • Noise Damping • Oil Resistant
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6-I-GF30		

Physical	Dry	Conditioned	Unit	Test Method
Density	1.25	--	g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (260°c/5.0 Kg)	12	--	cm³/10min	ISO 1133
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	1.26E+6 (8700)	972000 (6700)	psi (MPa)	ISO 527-1/1A/1
Tensile Stress (Break)	18900 (130)	13800 (95.0)	psi (MPa)	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	4.5	%	ISO 527-2/1A/5
Flexural Modulus	1.02E+6 (7000)	--	psi (MPa)	ISO 178
Flexural Stress (3.3% Strain)	26100 (180)	--	psi (MPa)	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-22°f (-30°c)	4.8 (10)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	6.7 (14)	8.1 (17)	ft·lb/in² (kJ/m²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°f (-30°c)	22 (46)	--	ft·lb/in² (kJ/m²)	
73°f (23°c)	27 (56)	29 (60)	ft·lb/in² (kJ/m²)	
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Deflection Temperature Under Load				
66 Psi (0.45 Mpa), Unannealed	419 (215)	--	°F (°C)	ISO 75-2/Bf
264 Psi (1.8 Mpa), Unannealed	374 (190)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	347 (175)	--	°F (°C)	ISO 306/B50
--	428 (220)	--	°F (°C)	ISO 306/A50

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Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				
0.0787 In (2.00 Mm)	0.47 (12)	--	in/min (mm/min)	ISO 3795
0.0787 In (2.00 Mm)	0.47 (12)	--	in/min (mm/min)	FMVSS 302
Flammability Classification				IEC 60695-11-10, -20
0.06 In (1.5 Mm)	HB	--		
0.12 In (3.0 Mm)	HB	--		

Additional Information

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

Characteristic properties

As a semi-crystalline thermoplastic SCHULAMID® 6 possesses high rigidity, hardness and good cold impact resistance.

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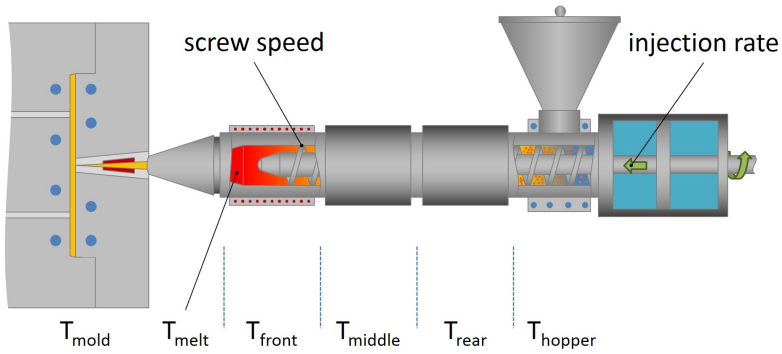

Injection	Dry (English)	Dry (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Hopper Temperature	158 °F	70 °C
Rear Temperature	446 °F	230 °C
Middle Temperature	464 °F	240 °C
Front Temperature	482 °F	250 °C
Nozzle Temperature	500 °F	260 °C
Processing (Melt) Temp	482 to 518 °F	250 to 270 °C
Mold Temperature	140 to 194 °F	60 to 90 °C
Injection Pressure	14500 to 26100 psi	100 to 180 MPa
Injection Rate	Fast	Fast
Holding Pressure	7250 to 16000 psi	50.0 to 110 MPa
Back Pressure	290 to 1160 psi	2.00 to 8.00 MPa
Cushion	0.0787 to 0.197 in	2.00 to 5.00 mm
Vent Depth	7.9E-4 in	0.020 mm
Screw Speed	< 709 in/min	< 18 m/min

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Injection Notes

Predrying

Typically a minimum predrying time of 3 to 4 hours at 80°C is recommended in an dehumidifying dryer. For optimal qualities a humidity of 0,04 - 0,1 % is recommended. Drying over 6 hours duration should occur at 60°C.

Reprocessing

Up to 10% regind may be used without change of property profile. Use only dried regrind.

Shut down

PA 6 can normally be left in the cyclinder. If in doubt purge with polyolefin.

Finishing

The material is suitable for machining. Varnishing, printing, gluing and embossing can be carried out using commercially available products.

Conditioning

Recently processed moulding parts possess improved brittleness. The material picks up moisture until the equilibrium moisture content is reached regarding the surrounding atmosphere. 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.