

Technical Data Sheet



Schulaketon E

Polyketone, Aliphatic
LyondellBasell Industries
Engineering Plastics

Product Description

High viscosity aliphatic Polyketone for injection molding and extrusion applications.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Processing Method	• Extrusion • Injection Molding		
Resin ID (ISO 1043)	• PK		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.22 g/cm ³	1.22 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	8.0 cm ³ /10min	8.0 cm ³ /10min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
73°F (23°C)	174000 psi	1200 MPa	ISO 527-1
176°F (80°C)	87000 psi	600 MPa	ISO 527-1/1A/1
Tensile Stress			
Yield, 73°F (23°C)	6530 psi	45.0 MPa	ISO 527-2
Yield, 176°F (80°C)	5080 psi	35.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	20 %	20 %	ISO 527-2/1A/50
Flexural Modulus ¹	189000 psi	1300 MPa	ISO 178
Flexural Stress ¹			ISO 178
9.0% Strain	6530 psi	45.0 MPa	
3.5% Strain	6530 psi	45.0 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°F (-40°C)	2.4 ft·lb/in ²	5.0 kJ/m ²	
73°F (23°C)	7.1 ft·lb/in ²	15 kJ/m ²	
Charpy Unnotched Impact Strength			
-40°F (-40°C)	No Break	No Break	ISO 179
73°F (23°C)	No Break	No Break	ISO 179/1eU
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	284 °F	140 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	158 °F	70.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	302 °F	150 °C	ISO 306/B50
--	367 °F	186 °C	ISO 306/A50
Melting Temperature	388 °F	198 °C	
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index (Solution A)	600 V	600 V	IEC 60112

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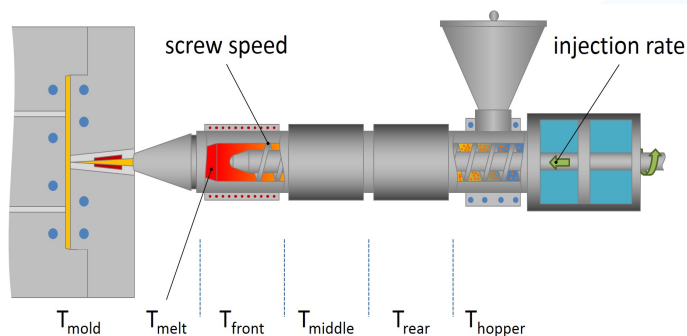
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	ISO 3795
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	FMVSS 302
Flame Rating			UL 94
0.06 in (1.6 mm)	HB	HB	IEC 60695-11-10, -20
0.13 in (3.2 mm)	HB	HB	
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in (1.5 mm)	1290 °F	700 °C	
0.12 in (3.0 mm)	1290 °F	700 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 in (1.5 mm)	1340 °F	725 °C	
0.12 in (3.0 mm)	1340 °F	725 °C	

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.15 %	0.15 %
Processing (Melt) Temp	437 to 464 °F	225 to 240 °C
Mold Temperature	140 to 248 °F	60 to 120 °C

Injection Notes

Before production start, nozzle, screw, barrel and hot-runner have to be cleaned with Polyolefin. Contamination of other material leads to degradation or crosslinking of SCHULAKETON®.

Avoid shut down for more than 15 minutes at moulding temperature, because of possible degradation and crosslinking of SCHULAKETON®. Purge with Polyolefin!

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Notes

¹ 0.079 in/min (2.0 mm/min)

Notes

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

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.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

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

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