

Technical Data Sheet

**Formion FI 396**

Ionomer
LyondellBasell Industries
Engineering Plastics

Product Description

Formion FI 396 is a 3% glass fiber reinforced, injection molding grade ionomer, which has been formulated for scratch resistance and impact.

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass Fiber, 3.0% Filler by Weight

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	0.970	0.968 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.2 g/10 min	4.2 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ¹	2680 psi	18.5 MPa	ASTM D638
Tensile Elongation ¹ (Break)	420 %	420 %	ASTM D638
Flexural Modulus - Tangent ² (73°F (23°C))	84000 psi	579 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	13 ft·lb/in	690 J/m	ASTM D256
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D, 15 sec)	60	60	ASTM D2240
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed, 0.126 in (3.20 mm)	131 °F	55.0 °C	ASTM D648

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature - Desiccant Dryer	108 to 133 °F	42 to 56 °C
Drying Time - Desiccant Dryer	2.0 to 4.0 hr	2.0 to 4.0 hr
Suggested Max Moisture	0.08 %	0.08 %
Rear Temperature	293 to 347 °F	145 to 175 °C
Middle Temperature	401 to 455 °F	205 to 235 °C
Front Temperature	401 to 473 °F	205 to 245 °C
Nozzle Temperature	401 to 473 °F	205 to 245 °C
Processing (Melt) Temp	419 to 473 °F	215 to 245 °C
Mold Temperature	50 to 81 °F	10 to 27 °C
Injection Pressure	7980 to 14900 psi	55.0 to 103 MPa
Injection Rate	Moderate	Moderate
Back Pressure	50.8 to 200 psi	0.350 to 1.38 MPa
Screw Speed	30 to 80 rpm	30 to 80 rpm
Cushion	0.197 to 0.394 in	5.00 to 10.0 mm

Injection Notes

Resin does not require drying as supplied. Recommended purge material is PE.

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Notes

¹ 2.0 in/min (50 mm/min)

² 0.051 in/min (1.3 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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