

Technical Data Sheet



Symterra LD1

Thermoset, Unspecified
LyondellBasell Industries
Engineering Plastics

Product Description

SymTerra™ LD1 is a fiberglass reinforced thermoset sheet molding compound for structural and semi-structural applications where high strength and durability are required in a low density composite.

- Specific gravity of 1.2 for weight savings vs. standard composites.
- Excellent flexural strength and outstanding toughness.
- Pigmentable with uniform color at low shrinkage
- Available with Renewable Resource Content

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass Fiber, 41% Filler by Weight
Features	• Durable • Good Colorability • Good Toughness • High Strength • Low Density • Low Shrinkage
Forms	• SMC - Sheet Molding Compound
Processing Method	• Compression Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.20	1.20 g/cm ³	ASTM D792
Water Absorption (Equilibrium)	0.20 %	0.20 %	ASTM D2584
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus (Compression Molded)	1.20E+6 psi	8270 MPa	ASTM D638
Tensile Strength (Compression Molded)	9000 psi	62.1 MPa	ASTM D638
Tensile Elongation			ASTM D638
Break, Compression Molded	1.4 %	1.4 %	
Flexural Modulus			ASTM D790
73°F (23°C), Compression Molded	1.00E+6 psi	6890 MPa	
Secant : 73°F (23°C), 0.0197 in (0.500 mm), Compression Molded	1.00E+6 psi	6890 MPa	
Secant : 73°F (23°C), 0.0984 in (2.50 mm), Compression Molded	1.00E+6 psi	6890 MPa	
Secant : 302°F (150°C), 0.0197 in (0.500 mm), Compression Molded	640000 psi	4410 MPa	
Secant : 302°F (150°C), 0.0984 in (2.50 mm), Compression Molded	580000 psi	4000 MPa	
Secant : 347°F (175°C), 0.0197 in (0.500 mm), Compression Molded	590000 psi	4070 MPa	
Secant : 347°F (175°C), 0.0984 in (2.50 mm), Compression Molded	450000 psi	3100 MPa	
Flexural Strength (Compression Molded)	23000 psi	159 MPa	ASTM D790
Compressive Strength ¹	23000 psi	159 MPa	ASTM D695
Poisson's Ratio	0.33	0.33	Internal Method
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (Compression Molded)	13 ft-lb/in	690 J/m	ASTM D256
Unnotched Izod Impact (Compression Molded)	21 ft-lb/in	1100 J/m	ASTM D4812
Thermal	Nominal Value (English)	Nominal Value (SI)	
CLTE			
Flow ²	1.1E-5 in/in/°F	1.9E-5 cm/cm/°C	
Transverse ³	3.1E-5 in/in/°F	5.6E-5 cm/cm/°C	
Thermal Conductivity	1.5 Btu·in/hr/ft ² /°F	0.21 W/m/K	

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Injection	Nominal Value (English)	Nominal Value (SI)
Mold Temperature	300 °F	149 °C
Injection Pressure	500 to 1000 psi	3.45 to 6.89 MPa

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Notes

¹ Compression Molded

² XY Direction

³ Z Direction

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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