

Technical Data Sheet

**Icorene XE00011**

Polyamide 6
LyondellBasell Industries
Rotomolding

Product Description

ICORENE® XE00011 is an experimental polyamide 6 based natural powder (PA6) containing stabiliser additives specifically designed for rotomoulding.

This grade is used for making rotomoulded parts typically used in high heat applications or for long term hot water contact.

The parts made using this material require post moulding conditioning in moist air or in water to achieve full impact resistance and ductility.

This powder may be rotational moulded without using an inert gas (N2 or CO2) atmosphere.

General

Material Status	• Experimental: Active
Availability	• Europe
Additive	• Antioxidant
Features	• UV Stabilized
Uses	• Automotive Under the Hood
Forms	• Powder
Processing Method	• Rotational Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density (Natural)	1.14 g/cm ³	1.14 g/cm ³	ASTM D1505
Water Absorption			ISO 62
Equilibrium, 73°F (23°C), 50% RH	3.0 %	3.0 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ISO 527-1/1A/50
73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ¹	218000 psi	1500 MPa	
73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ²	464000 psi	3200 MPa	
Tensile Stress			ISO 527-2/1A/50
Yield, 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ¹	7690 psi	53.0 MPa	
Yield, 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ²	11300 psi	78.0 MPa	
Tensile Strain			ISO 527-2/1A/50
Yield, 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ²	4.0 %	4.0 %	
Yield, 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ¹	25 %	25 %	
Break, 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ¹	80 %	80 %	
Break, 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ²	25 %	25 %	
Flexural Modulus			ASTM D790
73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ²	406000 psi	2800 MPa	
73°F (23°C), 0.126 in (3.20 mm), Rotational Molded ¹	247000 psi	1700 MPa	

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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength ³ 73°F (23°C), Complete Break	2.3 ft·lb/in ²	4.8 kJ/m ²	ISO 179/1eA
Impact Strength ¹ 73°F (23°C), 0.126 in (3.20 mm), Rotational Molded	36 ft·lb	49 J	ARM
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Annealed, 0.126 in (3.20 mm)	365 °F	185 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed, 0.126 in (3.20 mm)	131 °F	55.0 °C	ISO 75-2/Ae
Vicat Softening Temperature	383 °F	195 °C	ISO 306/B50
Melting Temperature	430 °F	221 °C	DSC
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate 0.0787 in (2.00 mm)	0.0 in/min	0.0 mm/min	ISO 3795
0.0787 in (2.00 mm)	0.0 in/min	0.0 mm/min	FMVSS 302
Flame Rating (0.06 in (1.5 mm))	V-2	V-2	UL 94

Notes

¹ CONDITIONED 50%RH 24HRS

² DRY

³ DRY, injection moulded

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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