

Technical Data Sheet

Icorene XE00010

Polyamide 6
LyondellBasell Industries
Rotomolding

Product Description

ICORENE® XE00010 is an experimental polyamide 6 based Black powder (PA6) containing stabiliser additives specifically designed for rotomoulding.

This grade is used for making rotomoulded parts typically used in high heat applications.

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

Additive	• Antioxidant
Features	• UV Stabilized
Uses	• Automotive Under the Hood
Forms	• Powder ¹
Processing Method	• Rotational Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
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Density (Black)	1.15 g/cm ³	1.15 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
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Tensile Modulus			ISO 527-1/1A/50
73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded ²	464000 psi	3200 MPa	
73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded ³	225000 psi	1550 MPa	
Tensile Stress			ISO 527-2/1A/50
Yield, 73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded ²	11300 psi	78.0 MPa	
Yield, 73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded ³	7830 psi	54.0 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 ³	25 %	25 %	
Break, 73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded ²	25 %	25 %	
Break, 73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded ³	80 %	80 %	
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 ³	254000 psi	1750 MPa	

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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength ⁴ 73°F (23°C), Complete Break	2.3 ft·lb/in ²	4.8 kJ/m ²	ISO 179/1eA
Impact Strength ³ 73°F (23°C), 0.126 In (3.20 Mm), Rotational Molded	37 ft·lb	50 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 Black
- ² DRY
- ³ CONDITIONED 50%RH 24HRS
- ⁴ DRY, injection moulded

Notes

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