Technical Data Sheet

Icorene XE00020 NAT

Polyamide 6

Product Description

Icorene XE00020 is an experimental toughened polyamide 6 based natural powder (PA6) containing AO&UV stabilizer additives specifically designed for rotomoulding.This PA6 toughened grade is used for making rotomoulded parts typically used in high heat applications or for long term hot water contact. It features good melt fluidity for moulding around metal inserts.The parts made using this material require post moulding conditioning in hot 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.FULL DATA TESTING WITH ROTOMOULDING NOT COMPLETED DEFAULT INJECTION FIGURES ARE USED CURRENTLY

Processing Method	Rotomolding
Attribute	UV Stabilized
Forms	Powder
Additive	Antioxidant
Application	Automotive Under the Hood

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Natural)	1.14	g/cm³	ASTM D1505
Mechanical			
Tensile Stress at Yield			
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Rotational Molded)	57.0	MPa	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Rotational Molded)	70.0	MPa	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Injection Molded)	70.0	MPa	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Injection Molded)	57.0	MPa	ISO 527-2
Tensile Strain at Break			
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Rotational Molded)	20	%	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Rotational Molded)	6.3	%	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Injection Molded)	20	%	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Injection Molded)	6.3	%	ISO 527-2
Tensile Strain at Yield			
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Rotational Molded)	4.1	%	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Rotational Molded)	13	%	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Injection Molded)	13	%	ISO 527-2
(Type 1A, 3.20 mm, 23 °C, 50 mm/min, Injection Molded)	4.1	%	ISO 527-2

Tensile Modulus			
(3.20 mm, 23 °C, 50 mm/min, Rotational Molded, Type 1A)	1870	MPa	ISO 527-1
(3.20 mm, 23 °C, 50 mm/min, Rotational Molded, Type 1A)	2330	MPa	ISO 527-1
(3.20 mm, 23 °C, 50 mm/min, Injection Molded, Type 1A)	1870	MPa	ISO 527-1
(3.20 mm, 23 °C, 50 mm/min, Injection Molded, Type 1A)	2330	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Edgewise, Injection Molded, Complete Break)	18	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A, Injection Molded, Complete Break)	8.7	kJ/m²	ISO 179
Flammable			
Burning Rate			
(2.00 mm)	0.0	mm/min	ISO 3795
(2.00 mm)	0.0	mm/min	FMVSS 302
Additional Information			
Water Absorption 23C/50RH	3	%	ISO 62
UL Information			
Flame Rating, (1.5 mm) (UL 94)	V-2		