Property Data

Envalior
Imagine the Future

EcoPaXX® Q210E–H

PA410

High Viscosity, Heat Stabilized, Food Contact Quality

Print Date: 2024–04–16

EcoPaXX® Q210E–H is a high viscous long aliphatic polyamide which offers excellent wear & friction properties at high humidity for use in gears, food conveyer belt parts and abrasive monofilaments.

Sustainability

Bio–based

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	2.4 / *	%	ISO 294–4
Molding shrinkage (normal)	1.6 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	3000 / 1600	MPa	ISO 527–1/–2
Nominal strain at break	20 / >50	%	ISO 527–1/–2
Yield stress	85 / 55	MPa	ISO 527–1/–2
Yield strain	4.4 / 15	%	ISO 527–1/–2
Tensile modulus (80°C)	800 / –	MPa	ISO 527–1/–2
Tensile modulus (120°C)	600 / –	MPa	ISO 527–1/–2
Tensile modulus (140°C)	460	MPa	ISO 527–1/–2
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	N / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	4.5 / 13	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	4.5 / 3.2	kJ/m²	ISO 179/1eA
Flexural modulus	2850 / 1400	MPa	ISO 178
Flexural strength	115 / 55	MPa	ISO 178

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THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	250 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	77 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	175 / *	°C	ISO 75–1/–2
Coeff. of linear therm. expansion (parallel)	0.9 / *	E–4/°C	ISO 11359–1/–2
Coeff. of linear therm. expansion (normal)	0.8 / *	E–4/°C	ISO 11359–1/–2
Oxygen index	24 / *	%	ISO 4589–1/–2
OTHER PROPERTIES	DRY / COND		
Water absorption	5.8 / *	%	Sim. to ISO 62
Humidity absorption	2.1 / *	%	Sim. to ISO 62
Density	1090 / –	kg/m³	ISO 1183
MATERIAL SPECIFIC PROPERTIES	DRY / COND		
Viscosity number	210 / *	cm³/g	ISO 307, 1157, 1628

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Viscosity–shear rate