Property Data

Envalior
Imagine the Future

EcoPaXX® Q–KS

PA410 FR(30)

Flame Retardant (halogen– phosphorous–free)

Print Date: 2024–03–27

EcoPaXX® Q–KS is a versatile halogen–free flame–retarded long aliphatic polyamide with UL94 V0 & CTI 600V rating with high flow and ductility. It offers excellent retention of electric properties upon humidity uptake.

Sustainability

Bio–based

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES	DRY / COND		
Molding shrinkage (parallel)	1.1 / *	%	ISO 294–4
Molding shrinkage (normal)	0.9 / *	%	ISO 294–4
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	3800 / 2200	MPa	ISO 527–1/–2
Nominal strain at break	6 / 30	%	ISO 527–1/–2
Yield stress	75 / 50	MPa	ISO 527–1/–2
Yield strain	4 / 12.5	%	ISO 527–1/–2
Tensile modulus (80°C)	1300 / –	MPa	ISO 527–1/–2
Charpy impact strength (+23°C)	75 / –	kJ/m²	ISO 179/1eU
Charpy impact strength (–30°C)	85 / 85	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	3 / 5	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	2.8 / 2.7	kJ/m²	ISO 179/1eA
Flexural modulus	3900 / 2300	MPa	ISO 178
Flexural strength	120 / 65	MPa	ISO 178
THERMAL PROPERTIES	DRY / COND		
Melting temperature (10°C/min)	250 / *	°C	ISO 11357–1/–3

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Temp. of deflection under load (1.80 MPa)	110 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	190 / *	°C	ISO 75–1/–2
Burning Behav. at 1.5 mm nom. thickn.	V–0 / *	class	IEC 60695–11–10
Thickness tested	1.5 / *	mm	IEC 60695–11–10
Burning Behav. at 3.0 mm nom. thickn.	V–0 / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
Oxygen index	36 / *	%	ISO 4589–1/–2
Glow Wire Flammability Index GWFI	960 / –	°C	IEC 60695–2–12
GWFI (Thickness (1) tested)	0.75 / –	mm	IEC 60695–2–12
Glow Wire Ignition Temperature GWIT	960 / –	°C	IEC 60695–2–13
GWIT (Thickness (1) tested)	0.75 / –	mm	IEC 60695–2–13

ELECTRICAL PROPERTIES	DRY / COND		
Relative permittivity (100Hz)	3.85 / –	–	IEC 62631–2–1
Relative permittivity (1 MHz)	3.45 / –	–	IEC 62631–2–1
Dissipation factor (100 Hz)	140 / –	E–4	IEC 62631–2–1
Dissipation factor (1 MHz)	200 / –	E–4	IEC 62631–2–1
Volume resistivity	>1E13 / 7E11	Ohm*m	IEC 62631–3–1
Surface resistivity	– / 6E13	Ohm	IEC 62631–3–2
Electric strength	32 / 27	kV/mm	IEC 60243–1
Comparative tracking index	600 / 600	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
Water absorption	4.8 / *	%	Sim. to ISO 62
Water absorption in water at 23°C after 24h	0.6 / *	%	ISO 62
Humidity absorption	1.8 / *	%	Sim. to ISO 62
Density	1160 / –	kg/m³	ISO 1183

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