

Akulon[®] F–X9190

PA6

Low/Medium Viscosity, Injection Molding

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
RHEOLOGICAL PROPERTIES			
	DRY / COND		
Molding shrinkage (parallel)	1.1 / *	%	ISO 294–4
Molding shrinkage (normal)	1.1 / *	%	ISO 294–4
MECHANICAL PROPERTIES			
	DRY / COND		
Tensile modulus	3200 / 1000	MPa	ISO 527–1/–2
Nominal strain at break	20 / >50	%	ISO 527–1/–2
Yield stress	87 / 45	MPa	ISO 527–1/–2
Yield strain	4 / 25	%	ISO 527–1/–2
Flexural modulus	2850 / 900	MPa	ISO 178
Flexural strength	120 / 35	MPa	ISO 178
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)	5 / 35	kJ/m²	ISO 179/1eA
Charpy notched impact strength (–30°C)	3 / 5	kJ/m²	ISO 179/1eA
THERMAL PROPERTIES			
	DRY / COND		
Melting temperature (10°C/min)	220 / *	°C	ISO 11357–1/–3
Temp. of deflection under load (1.80 MPa)	60 / *	°C	ISO 75–1/–2
Temp. of deflection under load (0.45 MPa)	150 / *	°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)	1 / *	E–4/°C	ISO 11359–1/–2
Burning Behav. at 1.5 mm nom. thickn.	V–2 / *	class	IEC 60695–11–10
Thickness tested	1.5 / *	mm	IEC 60695–11–10

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Burning Behav. at 3.0 mm nom. thickn.	V–2 / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
Burning Behav. at 0.75 mm nom. thickn.	V–2 / *	class	IEC 60695–11–10
Thickness tested	0.75 / *	mm	IEC 60695–11–10
Oxygen index	26 / *	%	ISO 4589–1/–2

ELECTRICAL PROPERTIES	DRY / COND		
Relative permittivity (100Hz)	3.4 / 15	–	IEC 62631–2–1
Relative permittivity (1 MHz)	3.1 / 4.7	–	IEC 62631–2–1
Dissipation factor (100 Hz)	65 / 3900	E–4	IEC 62631–2–1
Dissipation factor (1 MHz)	165 / 1300	E–4	IEC 62631–2–1
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 62631–3–1
Surface resistivity	– / 1E14	Ohm	IEC 62631–3–2
Electric strength	30 / 20	kV/mm	IEC 60243–1
Comparative tracking index	– / 600	V	IEC 60112

OTHER PROPERTIES	DRY / COND		
Water absorption	10 / *	%	Sim. to ISO 62
Humidity absorption	2.8 / *	%	Sim. to ISO 62
Density	1130 / –	kg/m³	ISO 1183

MATERIAL SPECIFIC PROPERTIES	DRY / COND		
Viscosity number	129 / *	cm³/g	ISO 307, 1157, 1628