

Akulon[®] F-X9190

PA6

Low/Medium Viscosity, Injection Molding

Print Date: 2025-10-04

<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
<i>RHEOLOGICAL PROPERTIES</i>			
	<i>DRY / COND</i>		
Molding shrinkage (parallel)	1.1 / *	%	ISO 294-4
Molding shrinkage (normal)	1.1 / *	%	ISO 294-4
<i>MECHANICAL PROPERTIES</i>			
	<i>DRY / COND</i>		
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/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	5 / 35	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	3 / 5	kJ/m ²	ISO 179/1eA
<i>THERMAL PROPERTIES</i>			
	<i>DRY / COND</i>		
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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Property Data

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<i>PROPERTIES</i>	<i>TYPICAL DATA</i>	<i>UNIT</i>	<i>TEST METHOD</i>
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/m ³	ISO 1183

MATERIAL SPECIFIC PROPERTIES

DRY / COND

Viscosity number	129 / *	cm ³ /g	ISO 307, 1157, 1628
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