Property Data

Envalior
Imagine the Future

Akulon® F223-D

PA6

Low/Medium Viscosity, General purpose, Injection Molding, Food Contact Quality

Print Date: 2024-04-10

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)	4.5 / 35	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	2.5 / 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)	0.9 / *	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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PROPERTIES	*TYPICAL DATA*	*UNIT*	*TEST METHOD*
Burning Behav. at 3.0 mm nom. thickn.	V–2 / *	class	IEC 60695–11–10
Thickness tested	3 / *	mm	IEC 60695–11–10
Oxygen index	26 / *	%	ISO 4589–1/–2
Glow Wire Flammability Index GWFI	900 / –	°C	IEC 60695–2–12
GWFI (Thickness (1) tested)	1.5 / –	mm	IEC 60695–2–12
Glow Wire Flammability Index GWFI	875 / –	°C	IEC 60695–2–12
GWFI (Thickness (2) tested)	0.75 / –	mm	IEC 60695–2–12
Glow Wire Ignition Temperature GWIT	825 / –	°C	IEC 60695–2–13
GWIT (Thickness (1) tested)	1.5 / –	mm	IEC 60695–2–13
Glow Wire Ignition Temperature GWIT	875 / –	°C	IEC 60695–2–13
GWIT (Thickness (2) tested)	1 / –	mm	IEC 60695–2–13

ELECTRICAL PROPERTIES	*DRY / COND*		
Relative permittivity (100Hz)	3.2 / 14	–	IEC 62631–2–1
Relative permittivity (1 MHz)	3 / 4.5	–	IEC 62631–2–1
Dissipation factor (100 Hz)	50 / 3000	E–4	IEC 62631–2–1
Dissipation factor (1 MHz)	150 / 1200	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	28 / 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	132 / *	cm³/g	ISO 307, 1157, 1628

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