

# Akulon® F223-D

## PA6

Low/Medium Viscosity

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Properties	Typical Data	Unit	Test Method
<b>Rheological properties</b>			
	dry / cond		
Molding shrinkage (parallel)	1.1 / *	%	ISO 294-4
Molding shrinkage (normal)	1.1 / *	%	ISO 294-4
<b>Mechanical properties</b>			
	dry / cond		
Tensile modulus	3200 / 1000	MPa	ISO 527-1/-2
Nominal strain at break	20 / >50	%	ISO 527-1/-2
Yield stress	85 / 45	MPa	ISO 527-1/-2
Yield strain	4 / 25	%	ISO 527-1/-2
Flexural modulus	2600 / -	MPa	ISO 178
Flexural strength	100 / -	MPa	ISO 178
Charpy impact strength (+23°C)	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	8 / 35	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	5 / 5	kJ/m <sup>2</sup>	ISO 179/1eA
<b>Thermal properties</b>			
	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)	160 / *	°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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Properties	Typical Data	Unit	Test Method
Burning Behav. at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested	0.75 / *	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
<b>Electrical properties</b>	<b>dry / cond</b>		
Relative permittivity (100Hz)	3.4 / 15	-	IEC 60250
Relative permittivity (1 MHz)	3.1 / 4.7	-	IEC 60250
Dissipation factor (100 Hz)	65 / 3900	E-4	IEC 60250
Dissipation factor (1 MHz)	165 / 1300	E-4	IEC 60250
Volume resistivity	1E13 / 1E10	Ohm*m	IEC 60093
Surface resistivity	- / 1E14	Ohm	IEC 60093
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	* / 600	V	IEC 60112
<b>Other properties</b>	<b>dry / cond</b>		
Water absorption	10 / *	%	Sim. to ISO 62
Humidity absorption	2.8 / *	%	Sim. to ISO 62
Density	1130 / -	kg/m <sup>3</sup>	ISO 1183
<b>Material specific properties</b>	<b>dry / cond</b>		
Viscosity number	129 / *	cm <sup>3</sup> /g	ISO 307, 1157, 1628

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