

## Akulon® S223-HPG5

## PA66-I-GF25

25% Glass Reinforced, Impact Modified, Heat Stabilized, Resistant to Oil and Grease

Print Date: 2024-03-27

PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
MECHANICAL PROPERTIES	DRY / COND		
Tensile modulus	7500 / 6000	MPa	ISO 527-1/-2
Stress at break	150 / 110	MPa	ISO 527-1/-2
Strain at break	4 / 5.5	%	ISO 527-1/-2
Flexural modulus	7000 / –	MPa	ISO 178
Flexural strength	225 / –	MPa	ISO 178
Charpy impact strength (+23°C)	85 / 100	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	50 / 50	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	11 / 17	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	9/9	kJ/m²	ISO 179/1eA
THERMAL PROPERTIES	DRY / COND		
THERMAL PROPERTIES  Melting temperature (10°C/min)	DRY / COND 260 / *	°C	ISO 11357-1/-3
		°C	ISO 11357-1/-3 ISO 75-1/-2
Melting temperature (10°C/min)	260 / *		
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)	260 / * 245 / *	°C	ISO 75-1/-2
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)	260 / * 245 / * 260 / *	°C	ISO 75-1/-2 ISO 75-1/-2
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)  Coeff. of linear therm. expansion (parallel)	260 / * 245 / * 260 / * 0.2 / *	°C °C E-4/°C	ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)  Coeff. of linear therm. expansion (parallel)	260 / * 245 / * 260 / * 0.2 / *	°C °C E-4/°C	ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)  Coeff. of linear therm. expansion (parallel)  Coeff. of linear therm. expansion (normal)	260 / * 245 / * 260 / * 0.2 / * 0.8 / *	°C °C E-4/°C	ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)  Coeff. of linear therm. expansion (parallel)  Coeff. of linear therm. expansion (normal)	260 / * 245 / * 260 / * 0.2 / * 0.8 / *	°C °C E-4/°C E-4/°C	ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2 ISO 11359-1/-2
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)  Coeff. of linear therm. expansion (parallel)  Coeff. of linear therm. expansion (normal)  ELECTRICAL PROPERTIES  Relative permittivity (100Hz)	260 / * 245 / * 260 / * 0.2 / * 0.8 / *  DRY / COND 3.7 / 11	°C °C E-4/°C E-4/°C	ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2 ISO 11359-1/-2 IEC 62631-2-1
Melting temperature (10°C/min)  Temp. of deflection under load (1.80 MPa)  Temp. of deflection under load (0.45 MPa)  Coeff. of linear therm. expansion (parallel)  Coeff. of linear therm. expansion (normal)  ELECTRICAL PROPERTIES  Relative permittivity (100Hz)  Relative permittivity (1 MHz)	260 / * 245 / * 260 / * 260 / * 0.2 / * 0.8 / *  DRY / COND 3.7 / 11 3.3 / 4.6	°C °C E-4/°C E-4/°C  -	ISO 75-1/-2 ISO 75-1/-2 ISO 11359-1/-2 ISO 11359-1/-2 IEC 62631-2-1 IEC 62631-2-1

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## Property Data

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PROPERTIES	TYPICAL DATA	UNIT	TEST METHOD
Surface resistivity	- / 1E13	Ohm	IEC 62631–3–2
·	-		
Electric strength	35 / 30	kV/mm	IEC 60243-1
Comparative tracking index	500 / 500	V	IEC 60112
OTHER PROPERTIES	DRY / COND		
Water absorption	5.5 / *	%	Sim. to ISO 62
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1290 / -	kg/m³	ISO 1183
MATERIAL SPECIFIC PROPERTIES	DRY / COND		
Viscosity number	140 / *	cm³/g	ISO 307, 1157, 1628

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