

RADILON A CF300K 333 BK

DESCRIPTION

PA66 30% carbon fibre reinforced injection moulding grade. Heat stabilized. Black colour.

Suitable for parts and components requiring very high mechanical properties: stiffness, dimensional stability, fatigue and creep resistance. The presence of carbon fibres also provides higher electrical and thermal conductivity.

ISO 1043: PA66-CF30

REGIONAL AVAILABILITY: North America, Europe, Asia Pacific, South and Central America, Near East/Africa

MATERIAL HANDLING AND PROCESSING

The material is delivered in moisture-proof packaging ready for processing. Maximum recommended water content for best processing is 0.15%. Typical conditions with a desiccant drier: temperature 80 ° C, dew point -20 ° C or below, time 2-4 h or more. Special care must be taken to avoid moisture absorption and contamination with other polymers when adding regrind material. Colour variation and mechanical properties reduction may occur and should always be carefully monitored.

Injection Molding Processing Parameters

Melt Temperature
280 - 300°C

Mold Temperature
80 - 100°C

Injection Speed
medium

PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet
ROHS compliant 2011/65/EU and following amendments



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PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
PHYSICAL PROPERTIES				
Density		kg/m ³	1260	
Moulding shrinkage - Parallel / Normal	300/90/60 ^[1]	ISO 1183 ISO 294-4	%	0.2 / 0.4
Water Absorption, immersion at 23°C	2mm	ISO 62	%	6
Moisture Absorption 23°C - 50%RH	2mm	ISO 62	%	1.7
MECHANICAL PROPERTIES				
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	23800
Stress at Break	5mm/min	ISO 527-2/1A	MPa	250
Strain at Break	5mm/min	ISO 527-2/1A	%	2.1
Flexural Modulus	2mm/min	ISO 178	MPa	20000
Flexural Strength	2mm/min	ISO 178	MPa	370
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m ²	70
Charpy Impact Strength	-30°C	ISO 179/1eU	kJ/m ²	60
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m ²	7
Charpy Notched Impact Strength	-30°C	ISO 179/1eA	kJ/m ²	5
THERMAL PROPERTIES				
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	260
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	235
Heat Deflection Temperature	0.45 MPa	ISO 75/2Bf	°C	250
Vicat Softening Temperature	50°C/h 50N	ISO 306	°C	240
Coeff. of Linear Therm. Expansion	parallel, 23°C-55°C	ISO 11359-1/-2	E-6/K	14
Coeff. of Linear Therm. Expansion	normal, 23°C-55°C	ISO 11359-1/-2	E-6/K	95
FLAMMABILITY PROPERTIES				
Flammability	0.8mm	UL 94	class	HB
Glow Wire Flammability Index	2mm	IEC 60695-2-12	°C	700
Automotive Interior Flammability	3mm	ISO 3795	mm/min	<10
ELECTRICAL PROPERTIES				
Volume Resistivity	500V	IEC 62631-3-1	Ohm*m	100
Surface Resistivity	500V	IEC 62631-3-2	Ohm	1000
Comparative Tracking Index	Sol.A	IEC 60112	V	150

*: DAM = Dry As Moulded state according to ISO 16396-2, **: Cond = Conditioned state similar to ISO 1110

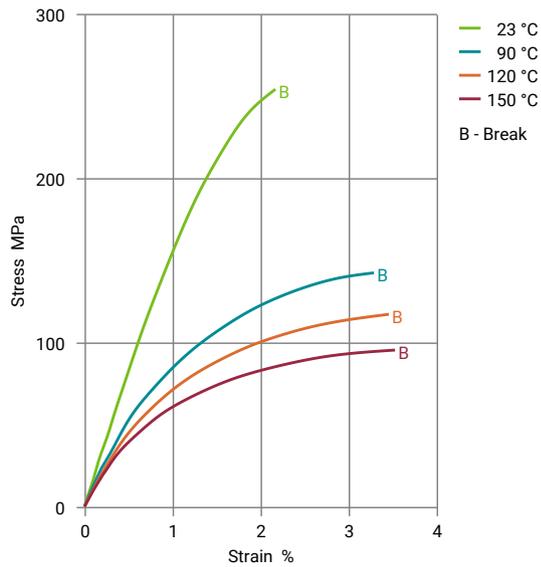
1: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]



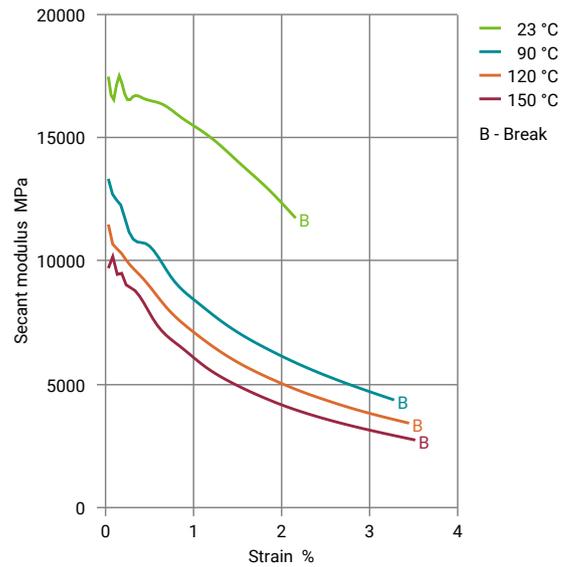
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DIAGRAMS

Stress-strain (dry)



Secant modulus-strain (dry)



Thermal expansion

