RADILON AESTUS T1 RV400RKC 306 BK

PROVISIONAL

DESCRIPTION

PPA injection moulding grade 40% glass fibre reinforced with high glass transition temperature and high melting point. Black colour.

Suitable for parts requiring high stiffness and strength. High resistance to hot water contact, suitable for drinking water contact.

ISO 1043: PA6T/6I-GF40

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

THE CHARACTERISTICS SHOWN HERE ARE PROVISIONAL AND REFLECT THE AVERAGE VALUES OF PROPERTIES MEASURED OVER A LIMITED NUMBER OF PRODUCTION CAMPAIGNS

MATERIAL HANDLING AND PROCESSING

The material is delivered in moisture-proof packaging ready for processing. Maximum recommended water content for best processing is 0.10%. Typical conditions with a desiccant drier: temperature 120° C, dew point -20 ° C or below, time 4 h or more. Avoid excessive shear rates and high thermal stresses for better processing. 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	Mold Temperature	Injection Speed
320 - 340°C	130 - 150°C	high

PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet
ROHS compliant 2011/65/EU and following amendments
Suitable for materials and articles intended to come into contact directly or indirectly with food in compliance with EU 10/2011
Suitable and approved for drinking water contact.
Please get in contact with our Customer Service for drinking water contact approvals and further information.

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PROPERTY		STANDARD	UNIT	VALUE DAM*	VALUE Cond**
PHYSICAL PROPERTIES					
Density		ISO 1183	kg/m³	1520	
Moulding shrinkage - Parallel / Normal	325/140/60 [1]	ISO 294-4	%	0.2 / 0.7	
Water Absorption, 24h immersion at 23°C	2mm	ISO 62	%	0.1	
Moisture Absorption 23°C - 50%RH	2mm	ISO 62	%	1.2	
MECHANICAL PROPERTIES					
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	15000	15250
Stress at Break	5mm/min	ISO 527-2/1A	MPa	235	205
Strain at Break	5mm/min	ISO 527-2/1A	%	2	1.9
Flexural Modulus	2mm/min	ISO 178	MPa	14100	14500
Flexural Strength	2mm/min	ISO 178	MPa	335	330
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m²	80	74
Charpy Impact Strength	-30°C	ISO 179/1eU	kJ/m²	65	
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m²	10	11
Charpy Notched Impact Strength	-30°C	ISO 179/1eA	kJ/m²	9	
THERMAL PROPERTIES					
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	310	
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	277	
Coeff. of Linear Therm. Expansion	parallel, 23°C-55°C	ISO 11359-1/-2	E-6/K	17	
Coeff. of Linear Therm. Expansion	normal, 23°C-55°C	ISO 11359-1/-2	E-6/K	58	
FLAMMABILITY PROPERTIES					
Flammability	0.8mm	UL 94	class	HB	
ELECTRICAL PROPERTIES					
Volume Resistivity	500V	IEC 62631-3-1	Ohm*m	1E13	1E11
Surface Resistivity	500V	IEC 62631-3-2	Ohm	1E12	1E10

*: 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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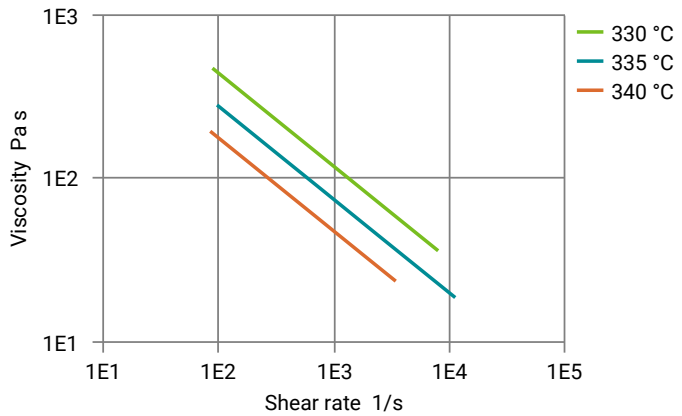
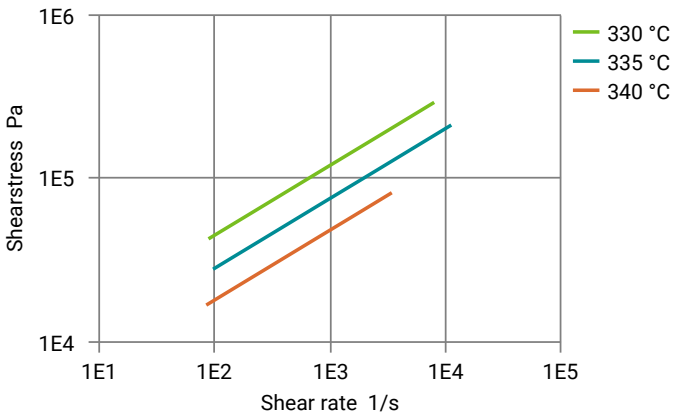
DIAGRAMS

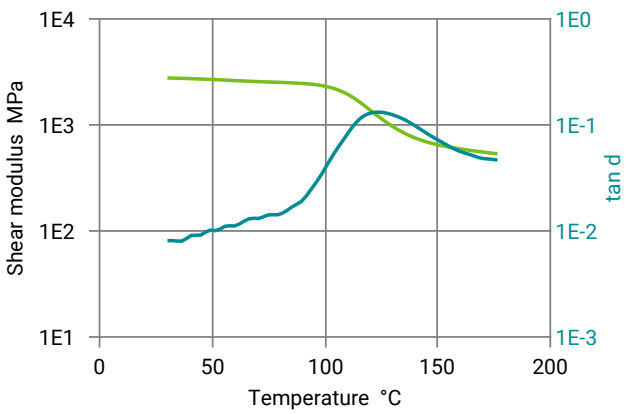
Viscosity-shear rate



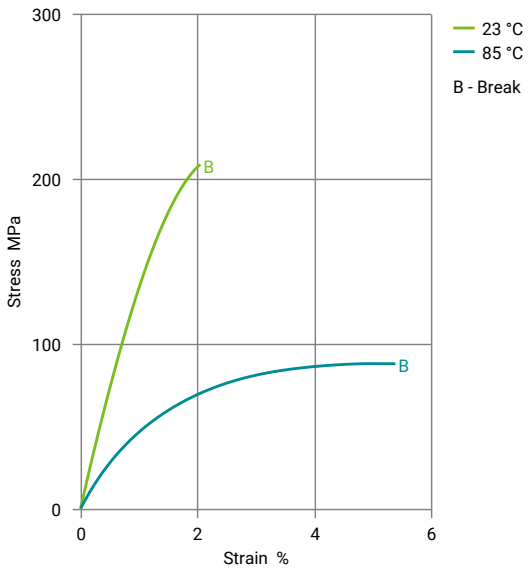
Shearstress-shear rate



Dynamic Shear modulus-temperature (dry)



Stress-strain (cond.)



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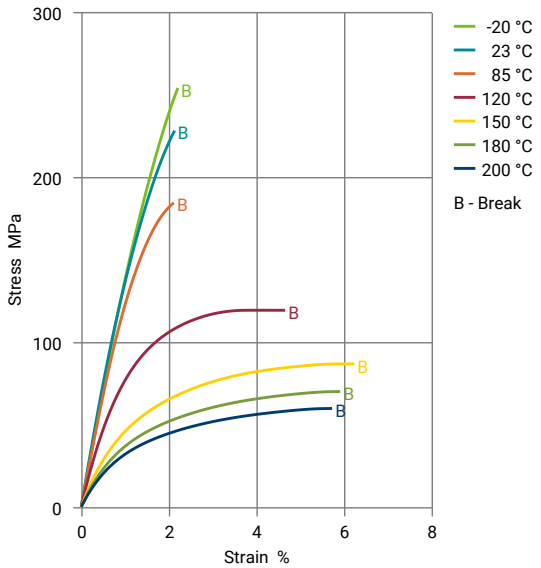
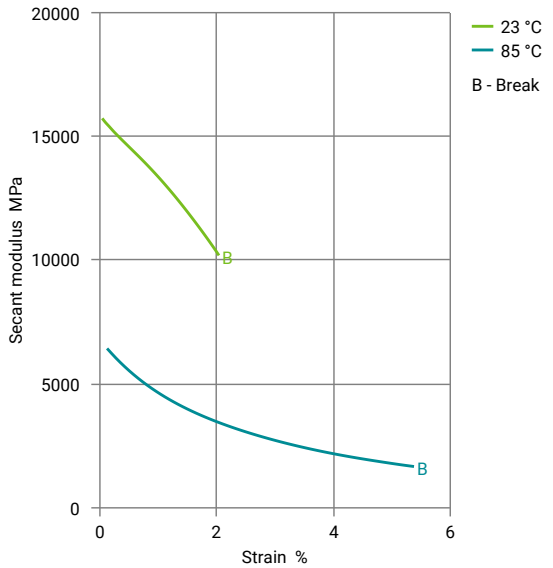
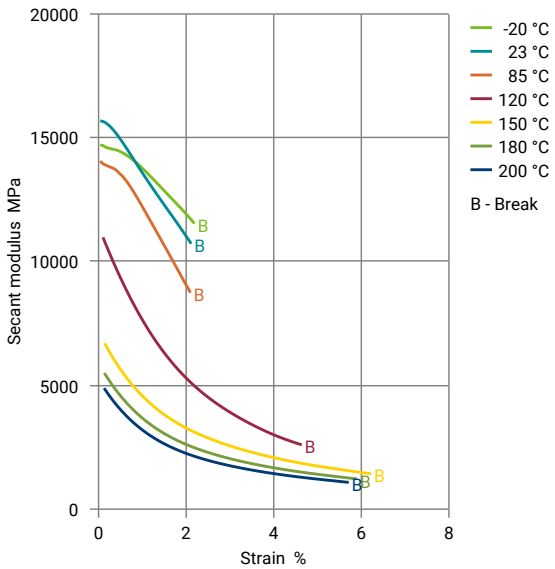
Stress-strain (dry)



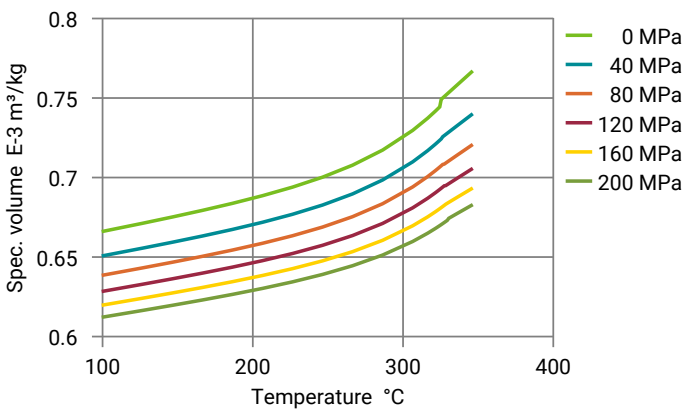
Secant modulus-strain (cond.)



Secant modulus-strain (dry)



Specific volume-temperature (pvT)



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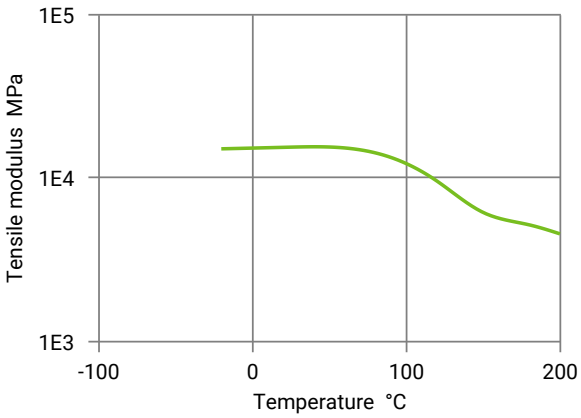
Tensile modulus-temperature (dry)



Thermal expansion