

PRODUCT INFORMATION

RADILON AESTUS T1 RV400RKC 306 BK

PRELIMINARY

DESCRIPTION

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

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

ISO 1043: PA-T GF40

THE CHARACTERISTICS SHOWN HERE MUST BE CONSIDERED PRELIMINARY AND INDICATIVE FOR A PRODUCT AT DEVELOPMENTAL STAGE

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 0.10%. 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
330 - 350°C

Mold Temperature
140 - 160°C

Injection Speed
high

PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet

ROHS compliant 2011/65/UE and following amendments

Suitable for use in contact with food and potable water. Please get in contact with our Customer Service for further information.

This material grade meets the requirements of: KTW Guidelines and DVGW-Standard W270 (11/2007), ACS positive lists included in the Circular DGC/VS4 n°2000/232 dated 27 April 2000

TECHNICAL DATA SHEET

RADILON AESTUS T1 RV400RKC 306 BK

PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
PHYSICAL PROPERTIES				
Density		kg/m ³	1520	
Moulding shrinkage - Parallel / Normal	325 / 140 / 60 ^[1]	%	0.2 / 0.7	
Water Absorption, 24h immersion at 23°C	2mm	%	0.1	
MECHANICAL PROPERTIES				
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	14800 14750
Stress at Break	5mm/min	ISO 527-2/1A	MPa	230 225
Strain at Break	5mm/min	ISO 527-2/1A	%	2.1 2
Flexural Modulus	2mm/min	ISO 178	MPa	12800
Flexural Strength	2mm/min	ISO 178	MPa	310
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m ²	65
Charpy Impact Strength	-30°C	ISO 179/1eU	kJ/m ²	55
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m ²	10 11
Charpy Notched Impact Strength	-30°C	ISO 179/1eA	kJ/m ²	9.5
THERMAL PROPERTIES				
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	325
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	293
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 60093	Ohm*m	1E13
Surface Resistivity	500V	IEC 60093	Ohm	1E12

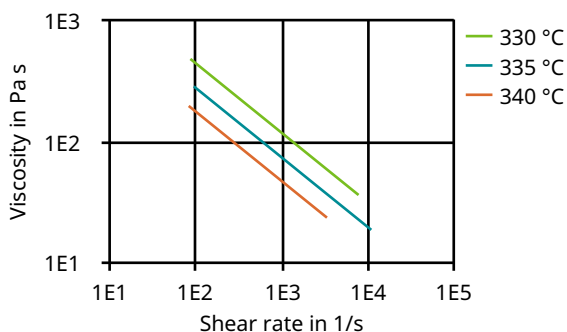
*: DAM = Dry As Moulded state according to ISO 16396-2 **: Cond = Conditioned state similar to ISO 1110 1: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]

TECHNICAL DATA SHEET

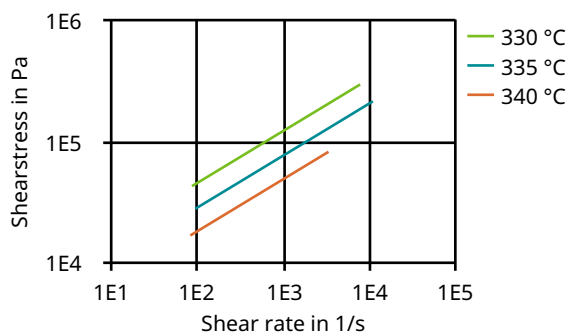
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Diagrams

Viscosity-shear rate

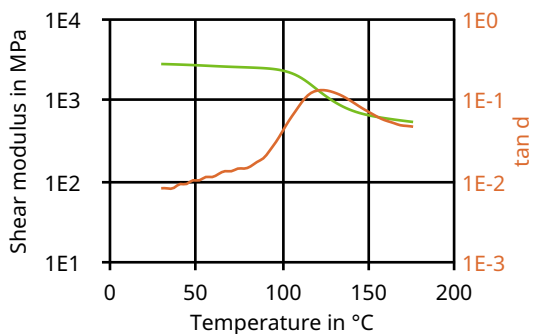


Shearstress-shear rate

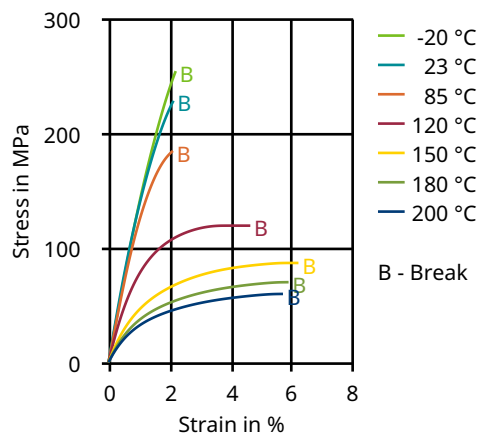


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Dynamic Shear modulus-temperature (dry)



Stress-strain (dry)

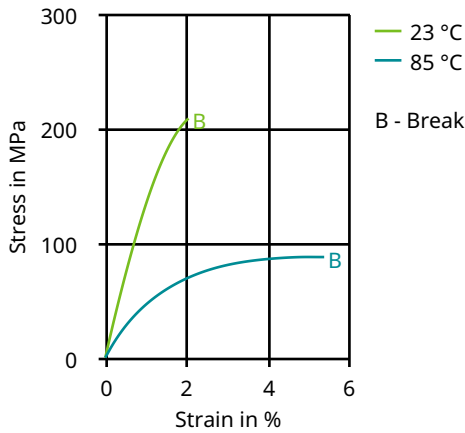


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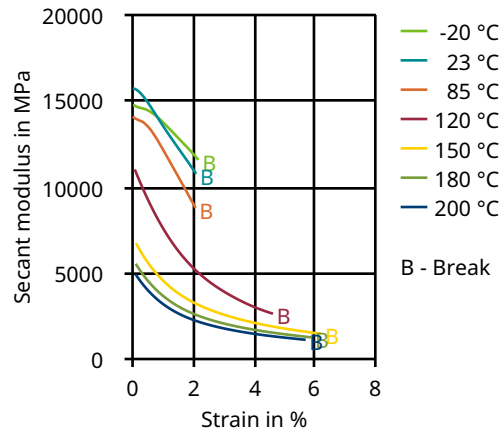
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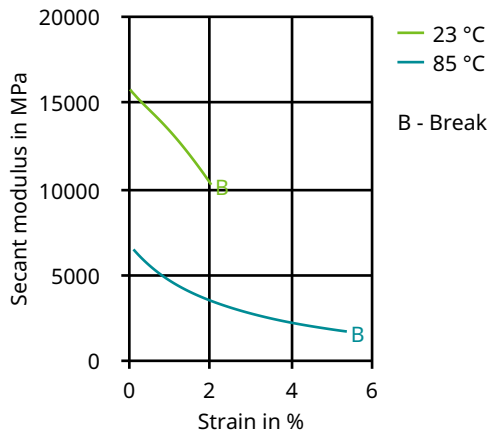
Stress-strain (cond.)



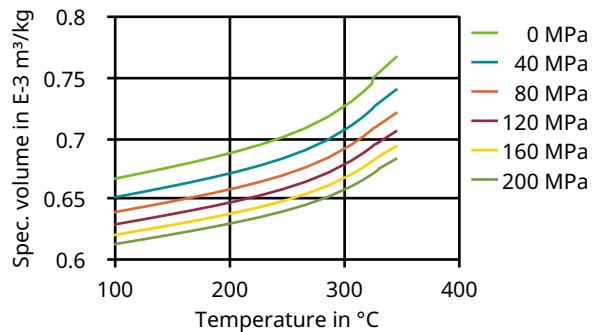
Secant modulus-strain (dry)



Secant modulus-strain (cond.)

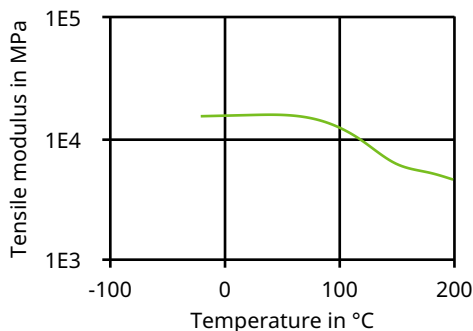


Specific volume-temperature (pvT)



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Tensile modulus-temperature (dry)



Coeff. of linear thermal expansion, parallel

