

## PRODUCT INFORMATION

# RADILON A RV500RW 339 BK

### DESCRIPTION

PA66 50% glass fiber reinforced injection moulding grade. Heat stabilized. Deep black colour.

Suitable for technical parts requiring very high stiffness and high mechanical resistance. Excellent heat ageing properties retention, improved welding lines strength. Especially fit for demanding metal replacement applications.

ISO 1043: PA66-T GF50

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 - 310°C

Mold Temperature  
80 - 100°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

## TECHNICAL DATA SHEET

# RADILON A RV500RW 339 BK

PROPERTY		STANDARD	UNIT	VALUE	
				DAM*	Cond**
<b>PHYSICAL PROPERTIES</b>					
Density		ISO 1183	kg/m <sup>3</sup>	1580	
Melt Flow Rate	275/5 <sup>[1]</sup>	ISO 1133	g/10min	8.2	
Moulding shrinkage - Parallel / Normal	300 /90 /60 <sup>[2]</sup>	ISO 294-4	%	0.2 / 0.7	
Water Absorption, immersion at 23°C	2mm	ISO 62	%	4	
Moisture Absorption 23°C - 50%RH	2mm	ISO 62	%	1.1	
Viscosity Index (Sulfuric Acid)		ISO 307	ml/g	152	
<b>MECHANICAL PROPERTIES</b>					
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	17000	14250
Stress at Break	5mm/min	ISO 527-2/1A	MPa	245	190
Strain at Break	5mm/min	ISO 527-2/1A	%	3	3.1
Flexural Modulus	2mm/min	ISO 178	MPa	16000	15400
Flexural Strength	2mm/min	ISO 178	MPa	385	305
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	105	112
Charpy Impact Strength	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	102	
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	18	25
Charpy Notched Impact Strength	-30°C	ISO 179/1eA	kJ/m <sup>2</sup>	16	
<b>THERMAL PROPERTIES</b>					
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	260	
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	255	
Heat Deflection Temperature	8.00 MPa	ISO 75/2Af	°C	215	
Vicat Softening Temperature	50°C/h 50N	ISO 306	°C	255	
Thermal Conductivity	23°C, inplane	-	W/(m K)	0.37	
Coeff. of Linear Therm. Expansion	parallel, 23°C-55°C	ISO 11359-1/-2	E-6/K	15	
Coeff. of Linear Therm. Expansion	normal, 23°C-55°C	ISO 11359-1/-2	E-6/K	85	
<b>FLAMMABILITY PROPERTIES</b>					
Glow Wire Flammability Index	1mm	IEC 60695-2-1/2	°C	700	
Glow Wire Flammability Index	2mm	IEC 60695-2-1/2	°C	700	
Glow Wire Ignition Temperature	1mm	IEC 60695-2-1/3	°C	725	
Glow Wire Ignition Temperature	2mm	IEC 60695-2-1/3	°C	725	

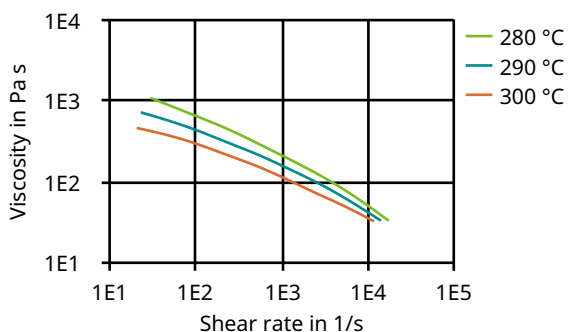
\*: DAM = Dry As Moulded state according to ISO 16396-2 \*\*: Cond = Conditioned state similar to ISO 1110 1: Temperature [°C] / Load [kg] 2: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]

TECHNICAL DATA SHEET

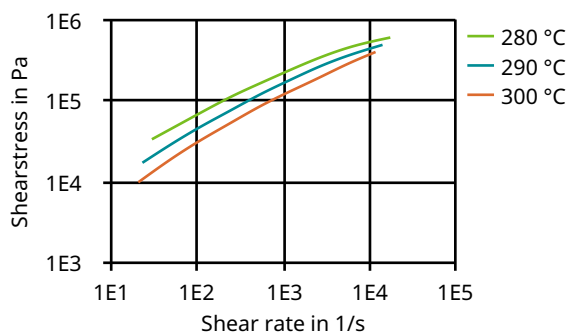
# RADILON A RV500RW 339 BK

Diagrams

Viscosity-shear rate

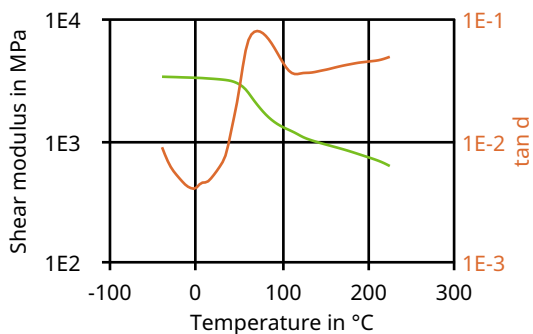


Shearstress-shear rate

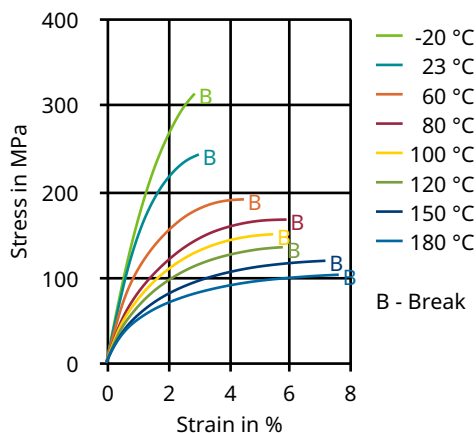


Bagley Correction, Rabinowitsch Correction

Dynamic Shear modulus-temperature (dry)



Stress-strain (dry)

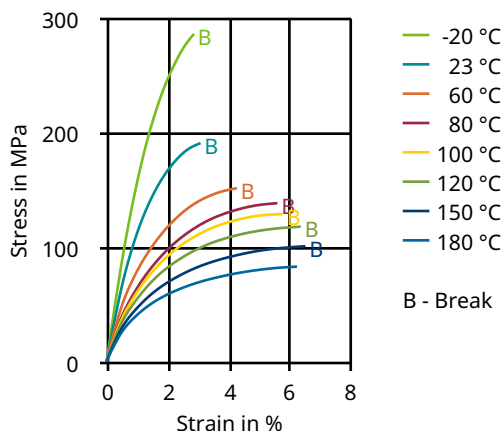


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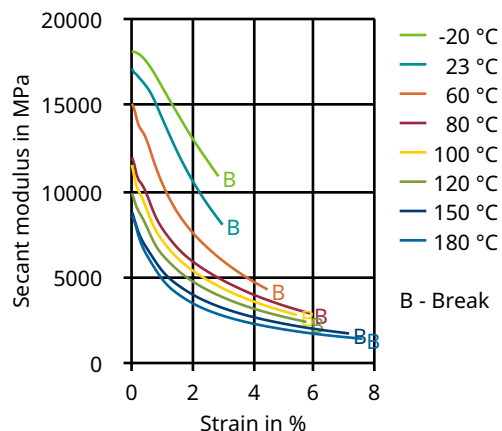
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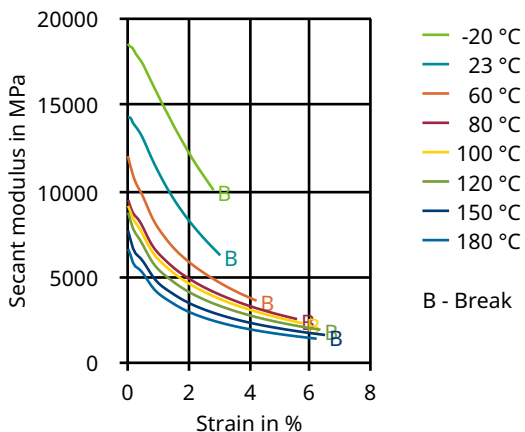
Stress-strain (cond.)



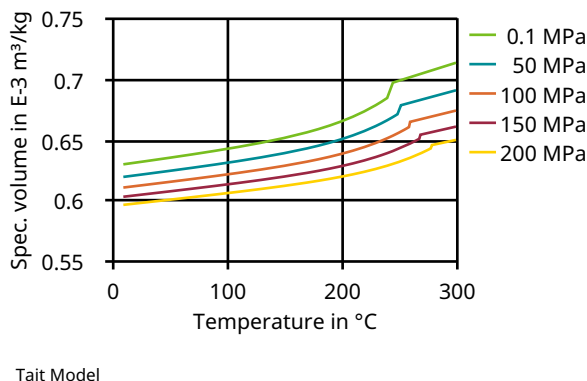
Secant modulus-strain (dry)



Secant modulus-strain (cond.)



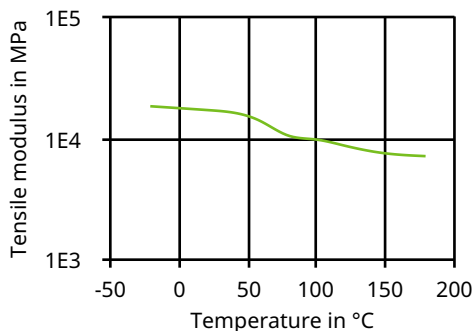
Specific volume-temperature (pvT)



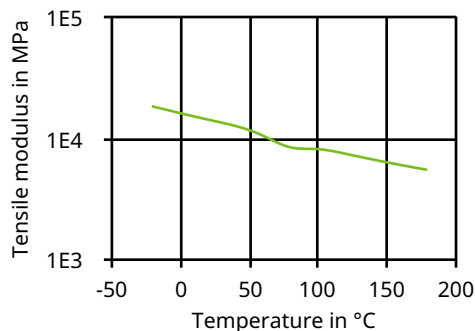
TECHNICAL DATA SHEET

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Tensile modulus-temperature (dry)



Tensile modulus-temperature (cond.)



Coeff. of linear thermal expansion, parallel

