RADIFLAM S RV300 HF 333 BK

DESCRIPTION

PA6 flame retardant injection moulding grade, halogen and red phosphorus free. 30% glass fibre reinforced and heat stabilized. Black colour.

Suitable for parts requiring fire retardancy along with high stiffness and good mechanical resistance. Good electrical insulating properties. Rated V-0 according to UL-94.

ISO 1043: PA6-GF30 FR(40)

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 80 ° C, dew point -20 ° C or below, time 2-4 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
250 - 280°C	80 - 100°C	medium-high

PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet
Underwriters Laboratories Inc. certified material www.ul.com
ROHS compliant 2011/65/EU and following amendments

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PROPERTY		STANDARD	UNIT	VALUE DAM*	VALUE Cond**
PHYSICAL PROPERTIES					
Density		ISO 1183	kg/m³	1420	
Moulding shrinkage - Parallel / Normal	270/80/60 [1]	ISO 294-4	%	0.3 / 0.6	
Water Absorption, immersion at 23°C	2mm	ISO 62	%	4.9	
Moisture Absorption 23°C - 50%RH	2mm	ISO 62	%	1.6	
MECHANICAL PROPERTIES					
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	10500	7200
Stress at Break	5mm/min	ISO 527-2/1A	MPa	140	90
Strain at Break	5mm/min	ISO 527-2/1A	%	3	4.5
Flexural Modulus	2mm/min	ISO 178	MPa	10000	6300
Flexural Strength	2mm/min	ISO 178	MPa	215	140
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m²	70	85
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m²	12	15
THERMAL PROPERTIES					
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	220	
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	200	
Vicat Softening Temperature	50°C/h 50N	ISO 306	°C	210	
Coeff. of Linear Therm. Expansion	parallel, 23°C-55°C	ISO 11359-1/-2	E-6/K	21	
Coeff. of Linear Therm. Expansion	normal, 23°C-55°C	ISO 11359-1/-2	E-6/K	85	
FLAMMABILITY PROPERTIES					
Flammability	0.4mm	UL 94	class	V-0	
Flammability	0.8mm	UL 94	class	V-0	
Glow Wire Flammability Index	1mm	IEC 60695-2-12	°C	960	
Glow Wire Flammability Index	2mm	IEC 60695-2-12	°C	960	
Glow Wire Ignition Temperature	1mm	IEC 60695-2-13	°C	725	
Glow Wire Ignition Temperature	2mm	IEC 60695-2-13	°C	775	
Automotive Interior Flammability	3mm	ISO 3795	mm/min	0	
FMVSS Class		ISO 3795	-	DNI	
ELECTRICAL PROPERTIES					
Volume Resistivity	500V	IEC 62631-3-1	Ohm*m	1E13	1E11
Surface Resistivity	500V	IEC 62631-3-2	Ohm	1E12	1E10
Electric Strength		IEC 60243-1	kV/mm	45	44
Comparative Tracking Index	Sol.A	IEC 60112	V	600 [PV] [2]	

*: 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]

PV: Preliminary Value

2: Proof Tracking Index (50drops)

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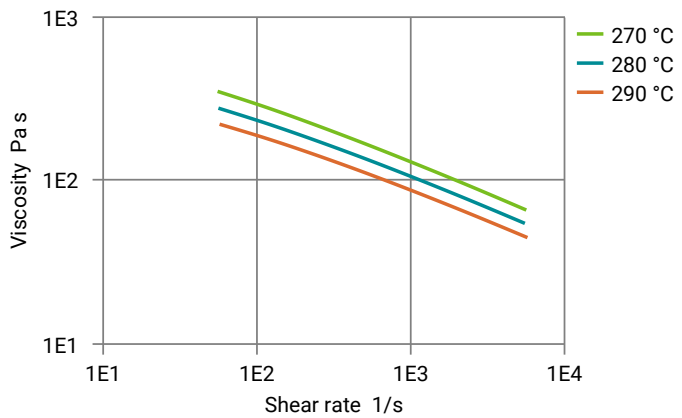
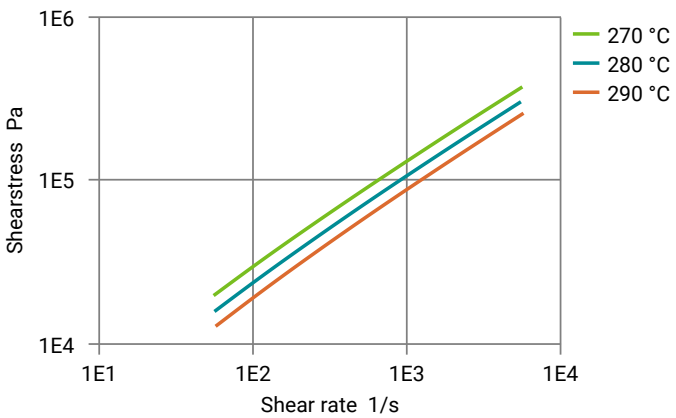
DIAGRAMS

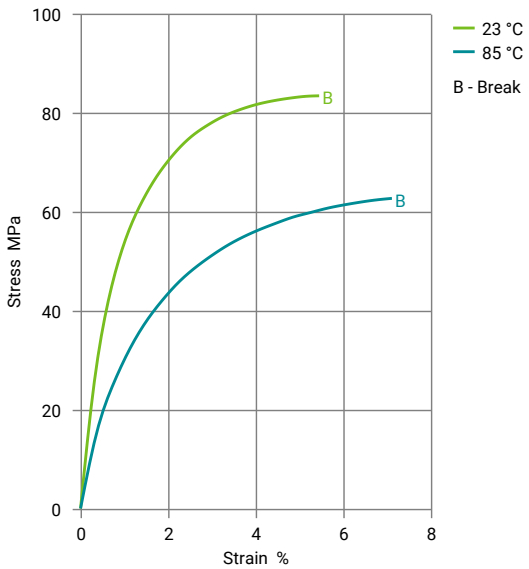
Viscosity-shear rate



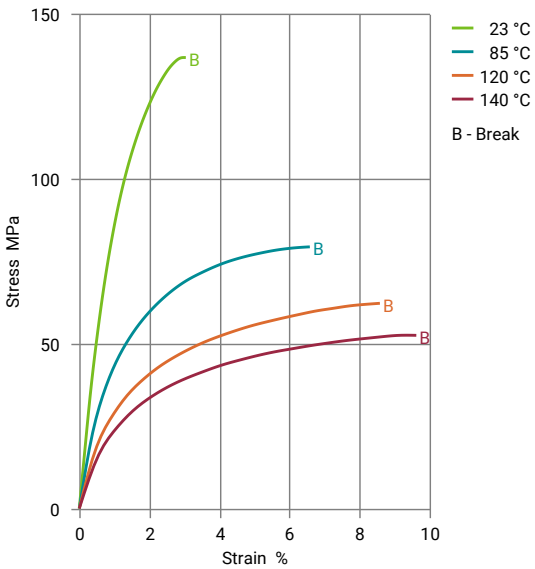
Shearstress-shear rate



Stress-strain (cond.)



Stress-strain (dry)



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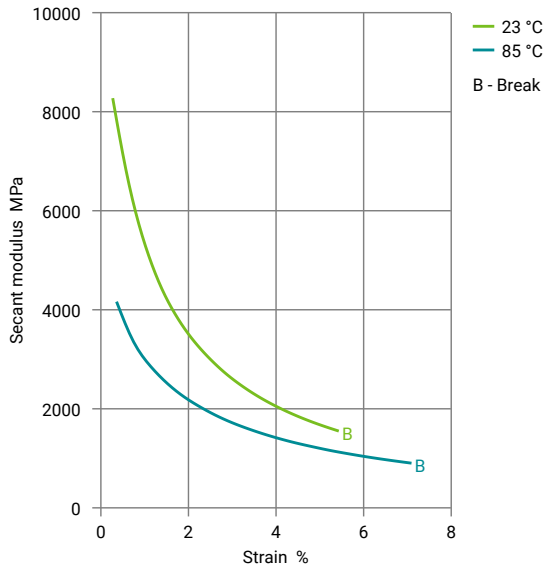
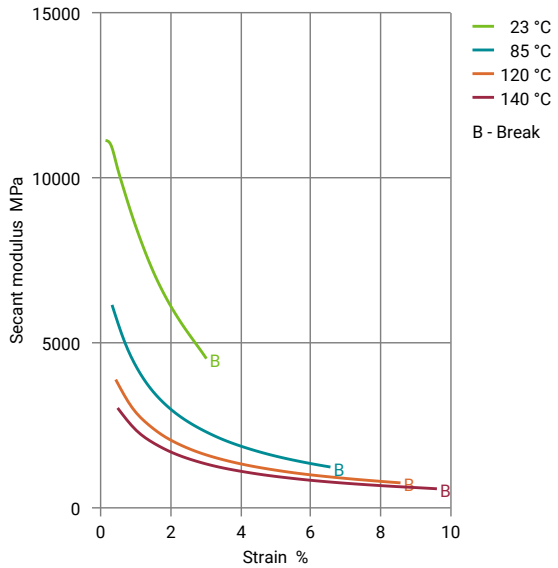
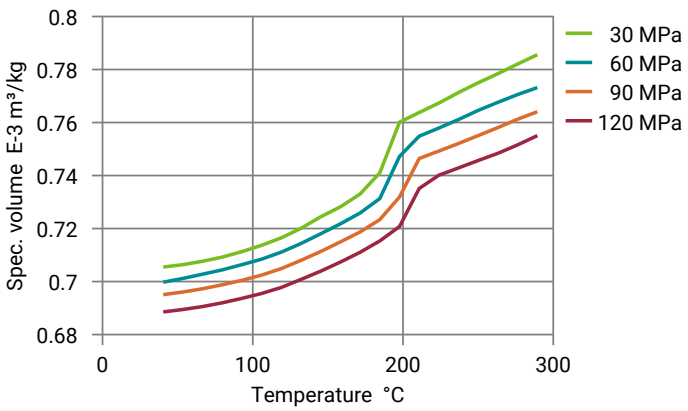
Secant modulus-strain (cond.)



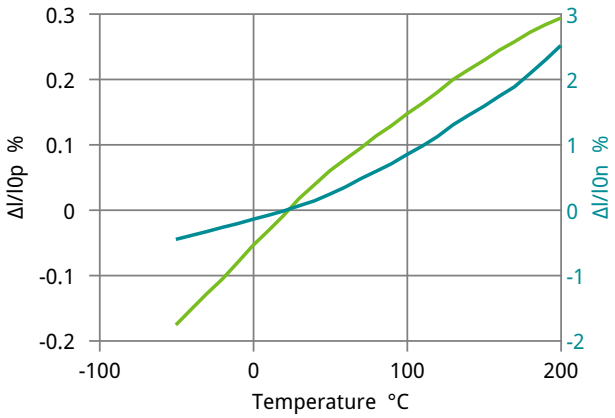
Secant modulus-strain (dry)



Specific volume-temperature (pvT)



Thermal expansion



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