RADILON S HSX88 100 NT

DESCRIPTION

PA6 injection moulding grade. Toughened. Natural colour.

Suitable for parts requiring improved impact resistance.

ISO 1043: PA6-I

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	Mold Temperature	Injection Speed
260 - 290°C	70 - 80°C	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*	VALUE Cond**
PHYSICAL PROPERTIES					
Density		ISO 1183	kg/m³	1090	
Moulding shrinkage - Parallel / Normal	280/70/60 [1]	ISO 294-4	%	1.3 / 1.2	
Water Absorption, immersion at 23°C	2mm	ISO 62	%	8.8	
Moisture Absorption 23°C - 50%RH	2mm	ISO 62	%	2.6	
MECHANICAL PROPERTIES					
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	2200	900
Stress at Yield	50mm/min	ISO 527-2/1A	MPa	60	40
Yield Strain	50mm/min	ISO 527-2/1A	%	4.3	20
Nominal Strain at Break	50mm/min	ISO 527-2/1A	%	40	>100
Flexural Modulus	2mm/min	ISO 178	MPa	2100	800
Flexural Strength	2mm/min	ISO 178	MPa	80	30
Charpy Impact Strength	+23°C	ISO 179/1eU	kJ/m²	N	
Charpy Notched Impact Strength	+23°C	ISO 179/1eA	kJ/m²	15	65
Charpy Notched Impact Strength	-30°C	ISO 179/1eA	kJ/m²	7	
Izod Notched Impact Strength	+23°C	ISO 180/1A	kJ/m²	20	
THERMAL PROPERTIES					
Melting Temperature	10°C/min	ISO 11357-1/-3	°C	220	
Heat Deflection Temperature	1.80 MPa	ISO 75/2Af	°C	55	
Heat Deflection Temperature	0.45 MPa	ISO 75/2Bf	°C	145	
Vicat Softening Temperature	50°C/h 50N	ISO 306	°C	170	
Ball Pressure Hardness		IEC 60695-10-2	°C	≥125	
FLAMMABILITY PROPERTIES					
Flammability	0.8mm	UL 94	class	HB	
Glow Wire Flammability Index	2mm	IEC 60695-2-12	°C	650	
Glow Wire Ignition Temperature	2mm	IEC 60695-2-13	°C	675	
Automotive Interior Flammability	3mm	ISO 3795	mm/min	<30	
ELECTRICAL PROPERTIES					
Volume Resistivity	500V	IEC 62631-3-1	Ohm*m	1E13	1E11
Surface Resistivity	500V	IEC 62631-3-2	Ohm	1E12	1E10
Comparative Tracking Index	Sol.A	IEC 60112	V	600	

*: 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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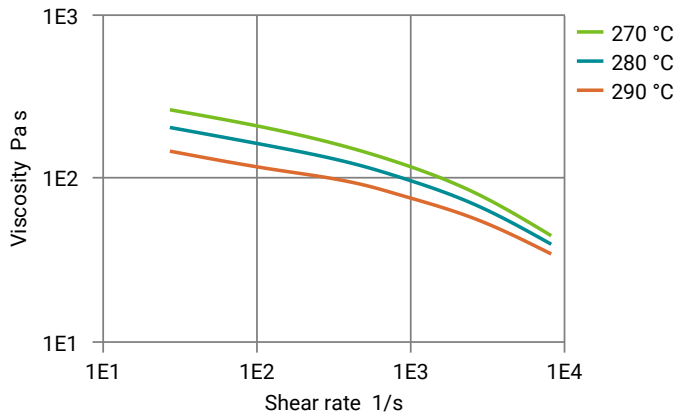
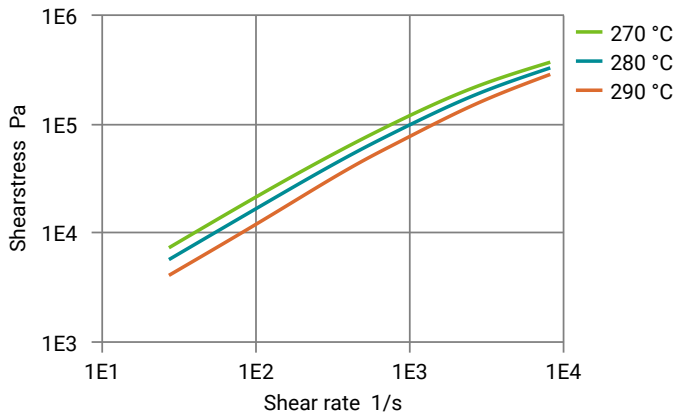
DIAGRAMS

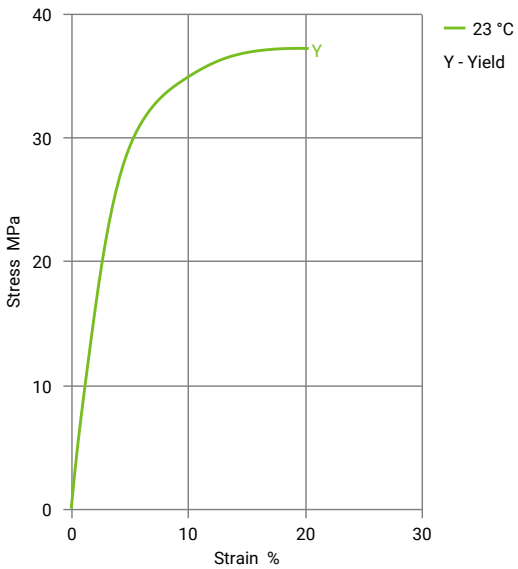
Viscosity-shear rate



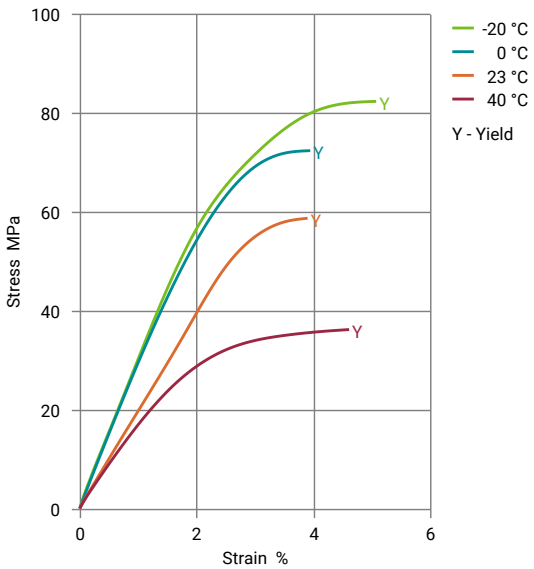
Shearstress-shear rate



Stress-strain (cond.)



Stress-strain (dry)



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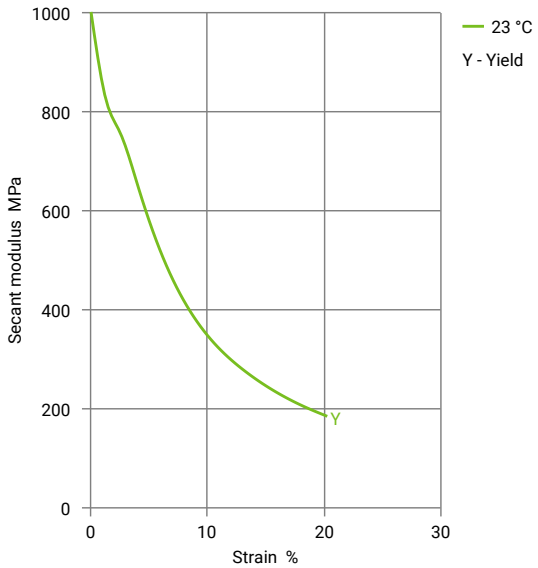
Secant modulus-strain (cond.)



Secant modulus-strain (dry)