

## PRODUCT INFORMATION

# RADILON S HS 105 M NT

### DESCRIPTION

PA6 injection moulding grade. Nucleated, fast cycling. Natural colour.

General purpose grade, suitable for parts requiring high productivity.

ISO 1043: PA6

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  
250 - 280°C

Mold Temperature  
70 - 80°C

Injection Speed  
medium

### PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet

Underwriters Laboratories Inc. certified material. File number: E116324 [www.ul.com](http://www.ul.com)

ROHS compliant 2011/65/UE and following amendments

## TECHNICAL DATA SHEET

# RADILON S HS 105 M NT

PROPERTY	STANDARD	UNIT	VALUE	
			DAM*	Cond**
<b>PHYSICAL PROPERTIES</b>				
Density		kg/m <sup>3</sup>	1140	
Moulding shrinkage - Parallel / Normal	270 /60 /30 <sup>[1]</sup>	%	0.9 / 1.0	
Water Absorption, immersion at 23°C	2mm	%	9.5	
Moisture Absorption 23°C - 50%RH	2mm	%	2.7	
Viscosity Index (Sulfuric Acid)	ISO 307	ml/g	146	
<b>MECHANICAL PROPERTIES</b>				
Tensile Modulus	1mm/min	MPa	3100	1200
Stress at Yield	50mm/min	MPa	75	45
Yield Strain		%	4.3	30
Nominal Strain at Break	50mm/min	%	35	>50
Flexural Modulus	2mm/min	MPa	2800	
Flexural Strength	2mm/min	MPa	105	
Charpy Impact Strength	+23°C	kJ/m <sup>2</sup>	N	
Charpy Notched Impact Strength	+23°C	kJ/m <sup>2</sup>	5.5	13
Charpy Notched Impact Strength	-30°C	kJ/m <sup>2</sup>	4.5	
<b>THERMAL PROPERTIES</b>				
Melting Temperature	10°C/min	°C	220	
Heat Deflection Temperature	1.80 MPa	°C	60	
Heat Deflection Temperature	0.45 MPa	°C	170	
Vicat Softening Temperature	50°C/h 50N	°C	190	
Coeff. of Linear Therm. Expansion	parallel, 23°C-55°C	E-6/K	85	
Coeff. of Linear Therm. Expansion	normal, 23°C-55°C	E-6/K	85	
<b>FLAMMABILITY PROPERTIES</b>				
Flammability	-mm	UL 94	class	V-2
Glow Wire Flammability Index	1mm	IEC 60695-2-1/2	°C	750
Glow Wire Flammability Index	2mm	IEC 60695-2-1/2	°C	750
Automotive Interior Flammability	3mm	ISO 3795	mm/min	0
<b>ELECTRICAL PROPERTIES</b>				
Volume Resistivity	500V	IEC 60093	Ohm*m	1E13 1E11
Surface Resistivity	500V	IEC 60093	Ohm	1E12 1E10
Comparative Tracking Index	Sol.A	IEC 60112	-	600

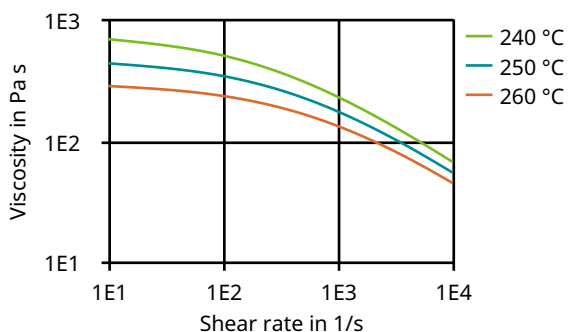
\*: DAM = Dry As Moulded state according to ISO 16396-2 \*\*: Cond = Conditioned state similar to ISO 1110 1: Melt Temperature [°C] / Mold Temperature [°C] / Cavity Pressure [MPa]

TECHNICAL DATA SHEET

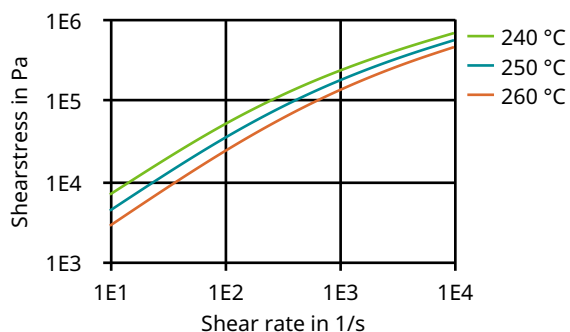
# RADILON S HS 105 M NT

Diagrams

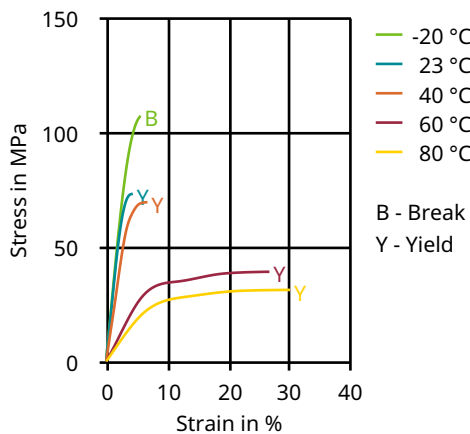
Viscosity-shear rate



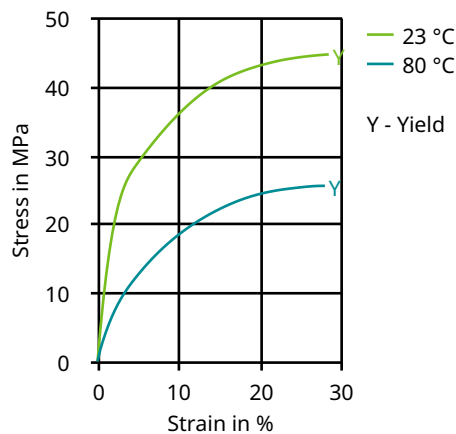
Shearstress-shear rate



Stress-strain (dry)



Stress-strain (cond.)



Specific volume-temperature (pvT)

