



# RADIPOL A 45L-1 NAT

Material code      Colour code

## DESCRIPTION

PA66 injection moulding grade. Internally lubricated. Fast cycling. Natural colour.

General purpose grade, suitable for parts requiring high productivity like fasteners, connectors, cable ties.

ISO 1043 : PA66

## 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.

### Processing Parameters

Melt Temperature:	Mold Temperature:	Injection Speed:
270 ÷ 290 °C	70 ÷ 90 °C	Medium

## PRODUCT SAFETY AND APPROVALS

For safety instruction please refer to Material Safety Data Sheet



Underwriters Laboratories Inc. certified material. File number: E146390 [www.ul.com](http://www.ul.com)

RoHS compliant 2002/95/CE and following amendments

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PROPERTY		STANDARD	UNIT	VALUE	
				DAM*	Cond**
<b>Physical Properties</b>					
Density		ISO 1183	Kg/m <sup>3</sup>	1140	
Moulding shrinkage - Parallel / Normal	290/70/30***	ISO 294-4	%	1.8 / 1.9	
Moisture absorption 23°C %50 RH	2mm thk	ISO 62	%	2.1	
Water absorption, immersion at 23°C	2mm thk	ISO 62	%	8.9	
<b>Mechanical Properties</b>					
Tensile Modulus	1mm/min	ISO 527-2/1A	MPa	3100	1300
Stress at Yield	50mm/min	ISO 527-2/1A	MPa	85	55
Yield Strain	50mm/min	ISO 527-2/1A	%	4.5	30
Nominal Strain at Break	50mm/min	ISO 527-2/1A	%	35	>50
Flexural Modulus	2mm/min	ISO 178	MPa	2900	
Flexural Strength	2mm/min	ISO 178	MPa	110	
Charpy Impact Strength	+23°C	ISO 179/1 eU	KJ/m <sup>2</sup>	NB	
Charpy Notched Impact Strength	+23°C	ISO 179/1 eA	KJ/m <sup>2</sup>	6	15
Charpy Notched Impact Strength	-30°C	ISO 179/1 eA	KJ/m <sup>2</sup>	4.5	
<b>Thermal Properties</b>					
Melting Temperature	10°C/min	ISO 11357-1-3	°C	260	
Heat Deflection Temperature	1.8 MPa	ISO 75/2 A f	°C	70	
Heat Deflection Temperature	0.45 MPa	ISO 75/2 B f	°C	200	
Vicat Softening Temperature	50°C/h	ISO 306/B50 50N	°C	240	
<b>Flammability Properties</b>					
Flammability	0.4mm	UL 94	class	V2	
Flammability	0.8mm	UL 94	class	V2	
Glow Wire Flammability Index	1mm / 2mm	IEC 60695-2-1/2	°C/mm	750 / 800	
Automotive interior flammability	Burn rate	FMVSS302	mm/min	0	
<b>Electrical Properties</b>					
Volume resistivity	500V	IEC 60093	ohm · m	1 E+13	1 E+11
Surface resistivity	500V	IEC 60093	ohm	1 E+12	1 E+10
Comparative Tracking Index	Sol.A	IEC 60112	V	600	

\*DAM = Dry As Moulded state \*\*Cond = Conditioned state similar to ISO 1110 \*\*\*Melt Temp [°C] / Mold Temp [°C] / Cavity press [MPa]