



PRODUCT INFORMATION

**NILENE P V2 LBAF**

Polypropylene homopolymer flame retardant UL94 V2, low density, good mechanical properties.

**ISO short Form** ISO 1043: PP FR(40+42)  
Pellets

**Key Features**

- Designed for injection moulding applications
- Low Halogen content
- Flame retardant
- Low density
- Antimony trioxide free

**Availability**

- YT: laser printable
- S: heat stabilized
- L: UV stabilized
- D: detergent stabilized
- All colours

**Compliance**

- Halogens free according to DIN VDE 0472 part 815

**Process**

- INJECTION MOULDING

**Application**

- Electronic
- Electrical

Property	Method	Unit	Value	Condition	State
<b>ELECTRICAL</b>					
Tracking Resistance (CTI - Method A)	IEC 60112	Volt	600		
<b>PHYSICAL</b>					
Density (+23°C)	ISO 1183	g/cm <sup>3</sup>	0,918		
Water Absorption (24h / +23°C)	ISO 62	%	0,05		
Mould Shrinkage (Parallel)	Internal method	%	1,4		
Mould Shrinkage (Normal)	Internal method	%	1,4		
Melt Flow Rate (MFR)	ISO 1133	g/10 min	12	230°C - 2,16 kg	
<b>MECHANICAL</b>					
Tensile Modulus	ISO 527-1,2	MPa	2100	Speed 5 mm/min	
Elongation at Yield	ISO 527-1,2	%	7	Speed 50 mm/min	
Tensile Yield Strength	ISO 527-1,2	MPa	33	Speed 50 mm/min	

The listed data are in the normal range of product properties, they should not be used to establish specification nor as the basis of design. Values are valid for natural coloured version only.

Unless specified to the contrary, the given values have been established on standardized test specimens at room temperature. These values are for natural colour only. The figures should be regarded as guide values only and not as binding minimum values. Please note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions, pigments and any other additives.

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Elongation at Break	ISO 527-1,2	%	28	Speed 50 mm/min
Tensile Break Strength	ISO 527-1,2	MPa	21	Speed 50 mm/min
Flexural Modulus	ISO 178	MPa	1700	Speed 1 mm/min
Flexural Max Strength	ISO 178	MPa	56	Speed 1 mm/min
IZOD Notched Impact	ASTM D256	J/m	24	-10°C
IZOD Notched Impact (+23°C)	ASTM D256	J/m	60	
IZOD Notched Impact (0°C)	ASTM D256	J/m	38	
IZOD Notched Impact (-25°C)	ASTM D256	J/m	22	
CHARPY Notched Impact	ISO 179/1eA	kJ/m <sup>2</sup>	2,1	-10°C
CHARPY Notched Impact (+23°C)	ISO 179/1eA	kJ/m <sup>2</sup>	4,5	
CHARPY Notched Impact (0°C)	ISO 179/1eA	kJ/m <sup>2</sup>	3,3	
CHARPY Notched Impact (-25°C)	ISO 179/1eA	kJ/m <sup>2</sup>	1,7	

**THERMAL**

Softening Temperature - 1 kg (VST/A/50)	ISO 306	°C	145	
Softening Temperature - 5 kg (VST/B/50)	ISO 306	°C	95	
Deflection Temperature 1,80 MPa (HDT A)	ISO 75A	°C	60	
Deflection Temperature 0,45 MPa (HDT B)	ISO 75B	°C	95	
Ball Pressure Test	IEC 60695-10-2	°C	> 125	
Continuous service temperature (20.000 h)	UL746 B	°C	100	
Continuous service temperature (short term)	UL746 B	°C	135	

**FLAMMABILITY**

Flame Behaviour (1 mm)	UL94	Class	V2	
Glow Wire Flammability Index-GWFI (1 mm)	IEC 60695-2-12	°C	960	
Glow Wire Flammability Index-GWFI (1,6 mm)	IEC 60695-2-12	°C	960	
Glow Wire Flammability Index-GWFI (3,2 mm)	IEC 60695-2-12	°C	960	
Glow Wire Ignition Temperature-GWIT (1 mm)	IEC 60695-2-13	°C	775	
Glow Wire Ignition Temperature-GWIT (1,6 mm)	IEC 60695-2-13	°C	750	

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Glow Wire Ignition Temperature-GWIT (3,2 mm)	IEC 60695-2-13	°C	750
Oxygen index	ASTM D2863	%	26

<b>INJECTION MOULDING</b>	<b>Value</b>
Drying Temperature (Desiccant Dryer)	70 - 80°C
Drying Time (Desiccant Dryer)	2 - 4 hours
Suggested Max Regrind	< 10%
Melt Temperature	190 - 220°C
Feed Temperature	160°C
Rear Temperature	180°C
Middle Temperature	200°C
Front Temperature	210°C
Nozzle Temperature	220°C
Mould Temperature	40 - 80°C
Injection Rate	Slow to Medium
Injection Pressure	70 - 120 Mpa
Packing Pressure	40 - 100 Mpa
Back Pressure	5 - 10 Mpa
Screw Revolving Speed	< 300 mm/sec
Cushion	< 5 mm
Vent Depth	0,05 mm

**Notes** It is normally not necessary to dry NILENE compounds, however should there be surface moisture (condensate) on the moulding compound as a result of incorrect storage, drying process is required. NILENE must be stored indoors at a temperature below 40°C avoiding humidity and direct sunlight as well. NILENE can be processed on a standard injection moulding unit. A general purpose metering screw is recommended with a zone distribution of 40% feed, 40% transition and 20% metering. When the heating cylinder is completely purged of NILENE material the machine may be shut down.

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