

**Product Texts**

**Medium-viscosity PA12 resin for the extrusion and injection moulding**

**VESTAMID® L1940 NC** is a heat-stabilized polyamide 12 compound for injection molding and for the extrusion wire insulation.

Properties of compounds based on PA12 vary little with changing humidity due to low moisture absorption. Parts made of this semi-crystalline material are characterized by exceptional impact strength, low coefficient of friction and good chemical resistance.

Pigmentation may affect values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

For information about processing of VESTAMID®, please follow the general commendations about "[Processing of VESTAMID® compounds](#)".

The values presented are typical or average values, they do not constitute a specification.

FOR FURTHER INFORMATION PLEASE CONTACT US AT [EVONIK-HP@EVONIK.COM](mailto:EVONIK-HP@EVONIK.COM)  
OR VISIT OUR PRODUCT AT [WWW.VESTAMID.COM](http://WWW.VESTAMID.COM)

<b>Processing/Physical Characteristics</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Melt volume-flow rate, MVR	<b>110 / *</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>275 / *</b>	°C	-
Load	<b>5 / *</b>	kg	-
<sup>[C]</sup> Molding shrinkage, parallel	<b>0.8 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	<b>1.1 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Density of melt	<b>860</b>	kg/m <sup>3</sup>	-
<sup>[C]</sup> Thermal conductivity of melt	<b>0.2</b>	W/(m K)	-
<sup>[C]</sup> Spec. heat capacity of melt	<b>3000</b>	J/(kg K)	-
<sup>[C]</sup> Ejection temperature	<b>175</b>	°C	-

[C]: CAMPUS

<b>Mechanical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Tensile Modulus	<b>1400 / 1030</b>	MPa	ISO 527
<sup>[C]</sup> Yield stress	<b>43 / 39</b>	MPa	ISO 527
<sup>[C]</sup> Yield strain	<b>4 / 14</b>	%	ISO 527
<sup>[C]</sup> Nominal strain at break	<b>&gt;50 / &gt;50</b>	%	ISO 527
<sup>[C]</sup> Charpy impact strength, +23°C	<b>N / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy impact strength, -30°C	<b>N / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Charpy notched impact strength, +23°C	<b>6 / 6</b>	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Type of failure	<b>C / C</b>	-	-
<sup>[C]</sup> Charpy notched impact strength, -30°C	<b>6 / 4.5</b>	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Type of failure	<b>C / C</b>	-	-
<sup>[C]</sup> Puncture - maximum force, +23°C	<b>3280 / -</b>	N	ISO 6603-2
<sup>[C]</sup> Puncture - maximum force, -30°C	<b>4320 / -</b>	N	ISO 6603-2
<sup>[C]</sup> Puncture energy, +23°C	<b>44 / -</b>	J	ISO 6603-2
<sup>[C]</sup> Puncture energy, -30°C	<b>54 / -</b>	J	ISO 6603-2
<sup>[C]</sup> Shore D hardness	<b>75 / *</b>	-	ISO 7619-1

[C]: CAMPUS

<b>Thermal properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Melting temperature, 10°C/min	<b>178 / *</b>	°C	ISO 11357-1/-3
<sup>[C]</sup> Glass transition temperature, 10°C/min	<b>45 / *</b>	°C	ISO 11357-1/-2

<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>50 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	<b>110 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	<b>140 / *</b>	°C	ISO 306
<sup>[C]</sup> Coeff. of linear therm. expansion, parallel	<b>150 / *</b>	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Coeff. of linear therm. expansion, normal	<b>150 / *</b>	E-6/K	ISO 11359-1/-2
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	<b>HB / *</b>	class	IEC 60695-11-10
Thickness tested	<b>1.5 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-
<sup>[C]</sup> Burning Behav. at thickness h	<b>HB / *</b>	class	IEC 60695-11-10
Thickness tested	<b>0.8 / *</b>	mm	-
Yellow Card available	<b>yes / *</b>	-	-

[C]: CAMPUS

<b>Electrical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Relative permittivity, 100Hz	<b>3.8 / -</b>	-	IEC 62631-2-1
<sup>[C]</sup> Relative permittivity, 1MHz	<b>2.5 / -</b>	-	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 100Hz	<b>450 / -</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 1MHz	<b>310 / -</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Volume resistivity	<b>&gt;1E13 / 3.1E12</b>	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Electric strength	<b>- / 35</b>	kV/mm	IEC 60243-1
<sup>[C]</sup> Comparative tracking index	<b>600 / -</b>	-	IEC 60112

[C]: CAMPUS

<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
<sup>[C]</sup> Water absorption	<b>1.5 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>0.8 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1010 / -</b>	kg/m <sup>3</sup>	ISO 1183

[C]: CAMPUS

<b>Test specimen production</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ISO Data</b>			
<sup>[C]</sup> Injection Molding, melt temperature	<b>220</b>	°C	ISO 294
Injection Molding, mold temperature	<b>80</b>	°C	ISO 294
Injection Molding, injection velocity	<b>200</b>	mm/s	ISO 294
Injection Molding, pressure at hold	<b>70</b>	MPa	ISO 294

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding, Profile Extrusion, Wire/Cable Extrusion, Other Extrusion

**Delivery form**

Pellets, Natural Color

**Additives**

Lubricants

**Special Characteristics**

High impact or impact modified, Heat stabilized or stable to heat

**Features**

Tribologic Grade

**Chemical Resistance**

General Chemical Resistance

**Regional Availability**

North America, Europe, Asia Pacific, South and Central America, Near East/Africa