

**Product Texts**

**PA12 FR(30 40) - Low-viscosity, self-extinguishing PA12 Compound, free of halogen**

**VESTAMID® LX9057 OR E20081** is a heat-stabilized compound with an efficient halogen-free flame retardant. Tested according to UL94, it complies with the flammability classification V-2.

The halogen-free formulation makes VESTAMID® LX9057 OR E20081 especially suitable for the electronic and cable industry.

VESTAMID® LX9057 OR E20081 can be used for injection molding as well as for wire extrusion coating.

The semi-crystalline compounds based on PA12 only absorb small amounts of water. Therefore manufactured parts exhibit excellent dimensional stability at changing ambient humidity, constant high toughness, low coefficient of friction and good chemical resistance.

Due to the presence of flame retardant the melt temperature should not exceed 240°C. We recommend melt temperatures of 200°C-220°C.

VESTAMID® LX9057 OR E20081 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

The use of colorants may affect property 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>45 / *</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>220 / *</b>	°C	-
Load	<b>2.16 / *</b>	kg	-
<sup>[C]</sup> Molding shrinkage, parallel	<b>0.9 / *</b>	%	ISO 294-4, 2577
<sup>[C]</sup> Molding shrinkage, normal	<b>1.0 / *</b>	%	ISO 294-4, 2577

[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>1200 / 820</b>	MPa	ISO 527
<sup>[C]</sup> Yield stress	<b>37 / 33</b>	MPa	ISO 527
<sup>[C]</sup> Yield strain	<b>12 / 17</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>130 / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Type of failure	<b>C / -</b>	-	-
<sup>[C]</sup> Charpy impact strength, -30°C	<b>69 / 122</b>	kJ/m <sup>2</sup>	ISO 179/1eU
<sup>[C]</sup> Type of failure	<b>C / C</b>	-	-
<sup>[C]</sup> Charpy notched impact strength, +23°C	<b>3 / 7</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>3 / 2</b>	kJ/m <sup>2</sup>	ISO 179/1eA
<sup>[C]</sup> Type of failure	<b>C / C</b>	-	-
<sup>[C]</sup> Shore D hardness	<b>69 / *</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>176 / *</b>	°C	ISO 11357-1/-3
<sup>[C]</sup> Glass transition temperature, 10°C/min	<b>40 / *</b>	°C	ISO 11357-1/-2
<sup>[C]</sup> Temp. of deflection under load, 1.80 MPa	<b>55 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Temp. of deflection under load, 0.45 MPa	<b>130 / *</b>	°C	ISO 75-1/-2
<sup>[C]</sup> Vicat softening temperature, B	<b>136 / *</b>	°C	ISO 306
<sup>[C]</sup> Burning Behav. at 1.5 mm nom. thickn.	<b>V-2 / *</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>V-2 / *</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>4.5 / 7.5</b>	-	IEC 62631-2-1
<sup>[C]</sup> Relative permittivity, 1MHz	<b>3.2 / 3.5</b>	-	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 100Hz	<b>920 / 1920</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Dissipation factor, 1MHz	<b>- / 537</b>	E-4	IEC 62631-2-1
<sup>[C]</sup> Volume resistivity	<b>7.4E11 / 9.3E9</b>	Ohm*m	IEC 62631-3-1
<sup>[C]</sup> Electric strength	<b>35 / 36</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>1.8 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Humidity absorption	<b>0.8 / *</b>	%	Sim. to ISO 62
<sup>[C]</sup> Density	<b>1080 / -</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

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding, Coating

**Delivery form**

Pellets

**Special Characteristics**

Flame retardant, Halogen-free, Heat stabilized or stable to heat

**Features**

Tribologic Grade

**Chemical Resistance**

General Chemical Resistance

**Applications**

Electrical and Electronical

**Regional Availability**

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