VESTAMID® X7166

PA12 FR(30) Evonik Operations GmbH

Product Texts

Low viscosity, self-extinguishing polyamide 12 compound, free of halogen and phosphorus

VESTAMID® X7166 NC is a heat stabilized PA 12 compound containing a non-migrating flame retardant, free of halogen and phosphorus. Tested according to UL94, VESTAMID® X7166 complies with the flammability class V-2.

Due to the halogen- and phosphorus-free flame retardants, VESTAMID® X7166 is especially suitable for the electronic and cable industry. It can be used for injection molding as well as for wire extrusion coating.

VESTAMID® X7166 is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

Due to the flame retardants, the melt temperature should not exceed 260°C. We recommend melt temperatures within a range of 210°C to 230°C.

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 OR VISIT OUR PRODUCT AT WWW.VESTAMID.COM

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**108 / ***	cm³/10min	ISO 1133
Temperature	**250 / ***	°C	-
Load	**2.16 / ***	kg	-
[C] Molding shrinkage, parallel	**0.7 / ***	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.8 / ***	%	ISO 294-4, 2577
[C] Density of melt	**860**	kg/m³	-
[C] Thermal conductivity of melt	**0.2**	W/(m K)	-
[C] Spec. heat capacity of melt	**3000**	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**1890 / -**	MPa	ISO 527
[C] Yield stress	**47 / -**	MPa	ISO 527
[C] Yield strain	**5.8 / -**	%	ISO 527
[C] Nominal strain at break	**20 / -**	%	ISO 527
[C] Charpy impact strength, +23°C	**57 / -**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C / -**	-	-
[C] Charpy impact strength, -30°C	**80 / -**	kJ/m²	ISO 179/1eU
[C] Type of failure	**C / -**	-	-
[C] Charpy notched impact strength, +23°C	**3 / -**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / -**	-	-
[C] Charpy notched impact strength, -30°C	**5 / -**	kJ/m²	ISO 179/1eA
[C] Type of failure	**C / -**	-	-

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**178 / ***	°C	ISO 11357-1/-3
[C] Glass transition temperature, 10°C/min	**41 / ***	°C	ISO 11357-1/-2
[C] Temp. of deflection under load, 1.80 MPa	**50 / ***	°C	ISO 75-1/-2

[C] Temp. of deflection under load, 0.45 MPa	**140 / ***	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**150 / ***	°C	ISO 306
[C] Burning Behav. at 1.5 mm nom. thickn.	**V-2 / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-
[C] Burning Behav. at thickness h	**V-2 / ***	class	IEC 60695-11-10
Thickness tested	**0.8 / ***	mm	-
Yellow Card available	**yes / ***	-	-
[C] Oxygen index	**34 / ***	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	**dry / cond**	**Unit**	**Test Standard**
ISO Data			
[C] Relative permittivity, 1MHz	**3.6 / -**	-	IEC 62631-2-1
[C] Dissipation factor, 1MHz	**340 / -**	E-4	IEC 62631-2-1
[C] Volume resistivity	**1E12 / -**	Ohm*m	IEC 62631-3-1
[C] Electric strength	**28 / -**	kV/mm	IEC 60243-1
[C] Comparative tracking index	**600 / -**	-	IEC 60112

[C]: CAMPUS

Other properties	**dry / cond**	**Unit**	**Test Standard**
[C] Water absorption	**1.3 / ***	%	Sim. to ISO 62
[C] Humidity absorption	**0.6 / ***	%	Sim. to ISO 62
[C] Density	**1070 / -**	kg/m³	ISO 1183

[C]: CAMPUS

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

[C]: CAMPUS

Characteristics

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

Delivery form
Pellets, Natural Color

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

Applications
Electrical and Electronical

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