

Technical Datasheet PA12 L20L

1) Product Description:

Grilamid L 20 L is a medium viscosity Polyamide 12 (PA12) extrusion type. It is UV and heat stabilized. Its main features are high surface quality, very good UV and heat resistance, high abrasion resistance, good chemical and oil resistance, low weight, and low density.

2) Applications:

Grilamid L 20 L has been especially developed for high speed extrusion of thin walled primary copper wire insulation and secondary fiber optic cable sheathing as a protection against termites and ants.

3) Typical data:

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE*
Density	ISO 1183	g/cc	1.01
Water Absorption	ISO 62	%	1.5
Moisture Absorption	ISO 62	%	0.700
Linear Mold Shrinkage, Flow	ISO 294-4, 2577	cm/cm	0.0080
Linear Mold Shrinkage, Transverse	ISO 294-4, 2577	cm/cm	0.0080
Hardness, Shore D	conditioned, 15s; ISO 868		70
Tensile Strength at Break	dry; ISO 527-1/-2	MPa	50.0
	conditioned; ISO 527-1/-2	MPa	50.0
Tensile Strength, Yield	dry; ISO 527-1/-2	MPa	40.0
	dry; ISO 527-1/-2	MPa	45.0
Elongation at Break	conditioned; ISO 527-1/-2	%	>= 50
	dry; ISO 527-1/-2	%	<= 50
Elongation at Yield	dry; ISO 527-1/-2	%	5.0
	conditioned; ISO 527-1/-2	%	12
Tensile Modulus	conditioned; ISO 527-1/-2	GPa	1.10
	dry; ISO 527-1/-2	GPa	1.40
Charpy Impact Unnotched	dry; ISO 179/1eU		NB
	conditioned; ISO 179/1eU		NB
	dry; ISO 179/1eU		NB @Temperature 30.0 °C
	conditioned; ISO 179/1eU		NB @Temperature 30.0 °C
	conditioned; ISO 179/1eA	J/cm ²	0.800
	conditioned; ISO 179/1eU		0.400 J/cm ² @Temperature 30.0 °C

PROPERTY	TEST METHOD	UNIT	TYPICAL VALUE*
Volume Resistivity	conditioned; IEC 60093	ohm-cm	<u>1.00e+13</u>
Surface Resistance	IEC 60093	ohm	<u>1.00e+12</u>
Dielectric Strength	conditioned; IEC 60243-1	kV/mm	<u>32.0</u>
Comparative Tracking Index	conditioned; IEC 60112	V	<u>600</u>
CTE, linear, Parallel to Flow	ISO 11359-1/-2	μm/m-°C	<u>120</u>
CTE, linear, Transverse to Flow	ISO 11359-1/-2	μm/m-°C	<u>140</u>
Melting Point	10°C/min; ISO 11357-1/-3	°C	<u>178</u>
Maximum Service Temperature, Air	long term; EMS	°C	<u>80.0</u> - <u>110</u>
	short term; EMS	°C	<u>150</u>
Deflection Temperature at 0.46 MPa (66 psi)	ISO 75-1/-2	°C	<u>130</u>
Deflection Temperature at 1.8 MPa (264 psi)	ISO 75-1/-2	°C	<u>50.0</u>
Flammability, UL94	IEC 60695-11-10		HB

* Typical values not to be construed as specifications.

