

PA6 - Nylon 6

Facts:

PA6, Nylons are tough, ridged, have high tensile strength and good resistance to creep, excellent abrasion, chemical and heat resistance and a low coefficient friction.

The addition of fibres and fillers increases such properties as strength, stiffness and decreases moisture absorption.

PA6 is used in many structural applications because of its good mechanical strength and rigidity. It is used in bearings because of its good wear resistance.

Applications:

Automotive parts, roller skates, carpet, bike parts, kitchen items, sports equipment, tool housings and bearings.

Limitations:

- High moisture absorption
- Requires UV stabilisation
- High Shrinkage
- Attacked by oxidizing agents
- Attacked by strong acids and bases
- High notch sensitivity

Kelon® B FR H CET/30-V0

Polyamide 6
LATI S.p.A.



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Technical Data

Product Description

Compound based on Polyamide 6 (PA 6).
Heat stabilised. Mineral filler. UL94 V-0 classified, with halogens, PBB/PBDE free. Product UL certified.
Low thermal expansion coefficient. Very high dimensional stability. High stiffness.

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E54080-243960
Search for UL Yellow Card	• LATI S.p.A.
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Mineral Filler, 30% Filler by Weight
Additive	• Flame Retardant • Heat Stabilizer
Features	• Flame Retardant • Good Dimensional Stability • Halogenated • Heat Stabilized • High Stiffness

Physical	Nominal Value Unit	Test Method
Density	1.59 g/cm ³	ISO 1183
Molding Shrinkage ³		ISO 294-4
Across Flow : 2.00 mm	0.35 to 0.60 %	
Flow : 2.00 mm	0.30 to 0.55 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		ISO 527-2/1
23°C	10000 MPa	
60°C	6500 MPa	
90°C	3400 MPa	
120°C	2600 MPa	
150°C	2300 MPa	
Tensile Stress		ISO 527-2/5
Break, 23°C	65.0 MPa	
Break, 60°C	50.0 MPa	
Break, 90°C	30.0 MPa	
Break, 120°C	25.0 MPa	
Break, 150°C	20.0 MPa	
Tensile Strain		ISO 527-2/5
Break, 23°C	1.5 %	
Break, 60°C	2.3 %	
Break, 90°C	5.0 %	
Break, 120°C	10 %	
Break, 150°C	20 %	

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-20°C	2.0 kJ/m ²	
23°C	2.0 kJ/m ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-20°C	15 kJ/m ²	
23°C	15 kJ/m ²	
Notched Izod Impact (23°C, 3.20 mm)	35 J/m	ASTM D256A

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	205 °C	ISO 75-2/B
1.8 MPa, Unannealed	155 °C	ISO 75-2/A

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Thermal	Nominal Value Unit	Test Method
Vicat Softening Temperature	195 °C	ISO 306/B50
CLTE - Flow (30 to 100°C)	0.000025 cm/cm/°C	ASTM D696
Continuous Use Temperature ⁴	115 °C	
Electrical	Nominal Value Unit	Test Method
Comparative Tracking Index ⁵ (Solution A)	450 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.750 mm	V-2	
1.50 mm	V-0	
3.00 mm	V-0	
Glow Wire Flammability Index		IEC 60695-2-12
1.00 mm	960 °C	
2.00 mm	960 °C	
Oxygen Index	28 %	ASTM D2863
Injection	Nominal Value Unit	
Drying Temperature	90.0 to 100 °C	
Drying Time	3.0 hr	
Processing (Melt) Temp	240 to 260 °C	
Mold Temperature	70.0 to 100 °C	
Injection Rate	Moderate	

Notes

¹ A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL IDES continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

² Typical properties: these are not to be construed as specifications.

³ at 60 Mpa of cavity pressure

⁴ 20000 hr

⁵ Without Surfactant

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LATI S.p.A.

Where to Buy

Supplier

LATI S.p.A.

VEDANO OLONA, VARESE Italy

Telephone: +39-0332 409111

Web: <http://www.lati.com/>

Distributor

PolySource

Telephone: 866-558-5300

Web: <http://www.polysource.net/>

Availability: North America



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– Birgit Elvardt Bader, Production Manager, Micotron

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"With UL IDES data services, our website now displays the most current information on the products we distribute and links to our backend RFQ and sales order system, adding both value and service for our customers."

– Kevin Chase, Owner & President, Chase Plastics



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