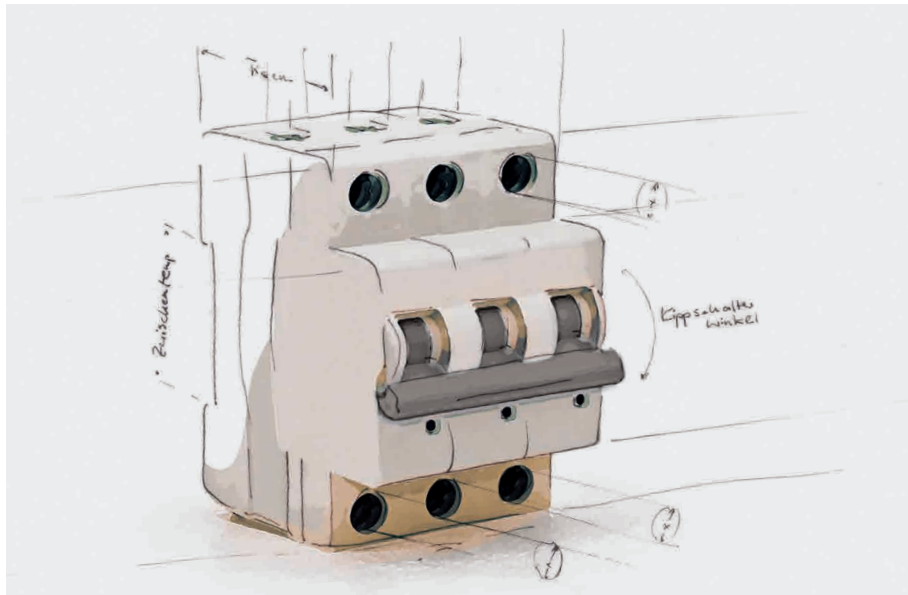


Bridging the gap between PA and PPA for E&E applications

Ultramid® T6000

Ultramid® T6000 is a high-temperature polyamide (PA66/6T) outperforming PA66 in mechanical and dielectric properties in presence of humidity and at elevated temperatures. It allows easy processing similar to standard PA with low tool corrosion, thus closing the gap to the Ultramid® Advanced PPA portfolio. It has been proven that the mold temperature has no significant influence on the mechanical properties. Ultramid® T6000 shows high flowability and opens up new, colorful possibilities with even white color shades for miniaturization parts with electrical protection. The UL cards testify to excellent RTI and GWIT values, the used flame-retardant is without halogens.



chemical resistance
low water uptake
dimensional stability
hydrophobicity



PPA = Polyphthalamide



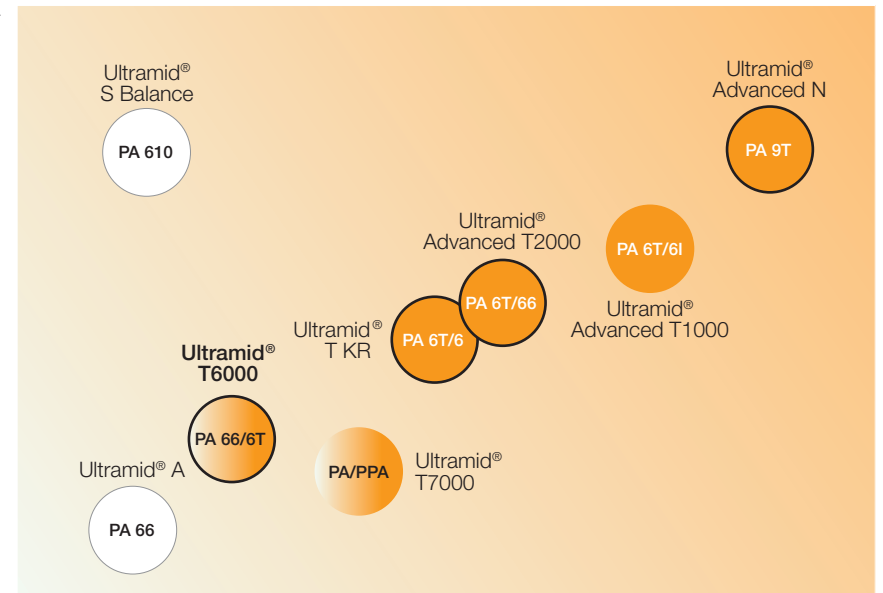
PPA blend or PPA copolymer, < 55% aromatic diacid content



PA = Polyamide



Flame retardant grades available



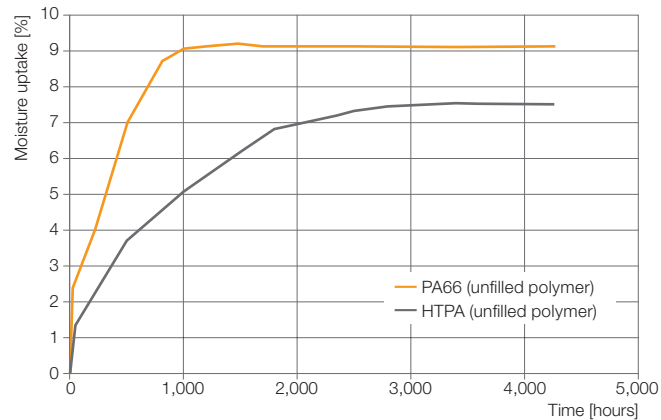
Performance at elevated temperatures and in humid conditions

Glass transition temperature, conditioned

ULTRAMID® T600

Ultramid® T6340G6

- V-0 UL rating at 0.4 mm
- High RTI values of up to 150 °C
- CTI of 600 V
- GWIT: 800 °C (0.8 mm)



Product	T _m [°C]	HDT A ISO 75 [°C]	E-modulus ISO 527 [GPa]	Tensile strength ISO 527 [MPa]
Ultramid® A3U42G6 (PA66 GF30 FR)	260	230	11.0/7.5	145/95
Ultramid® T6340G6 (66/6T GF30 FR)	280	257	11.0/9.1	145/110
Ultramid® Advanced T2340G6 (PA6T/66 GF30 FR)	310	>280	10.5/10.5	150/130

Easily colorable, beside orange and grey, even pure white products are possible.



Besides pre-colored compounds in black, grey, orange and white, UL® certified masterbatches are available for self-coloring.

Good dimensional stability

- Lower water uptake compared to PA66
- Small influence on properties due to low water uptake



Bridging the gap between PA66 and PPA

Ultramid® T6000 is bridging the gap between PA66 and PPA grades for key properties, also in conditioned state.

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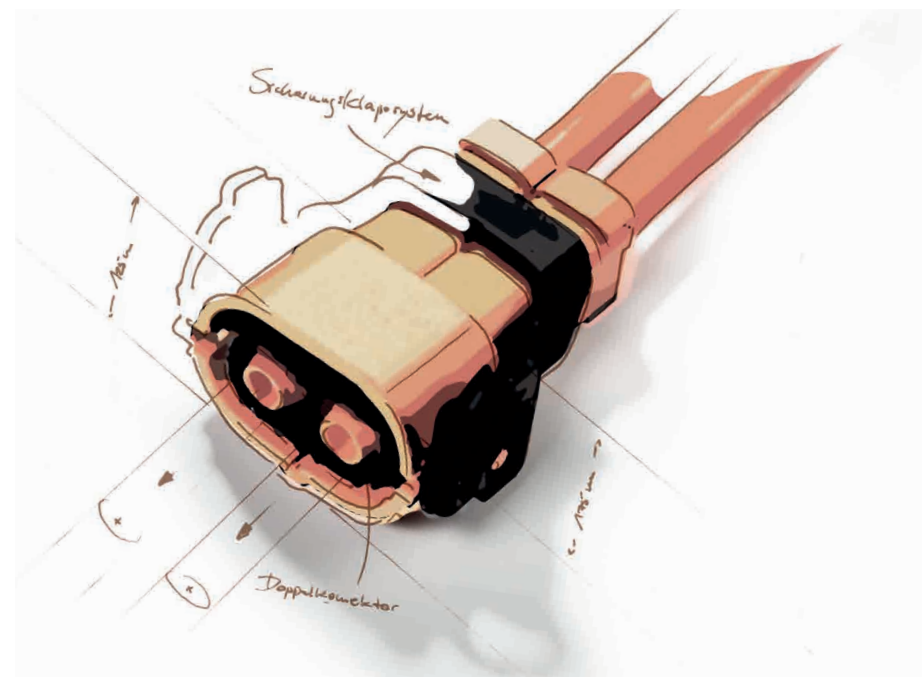
Mechanical properties

Ultramid®	Tensile modulus at 23 °C ISO 527-1/-2 [MPa]	Stress at break at 23 °C ISO 527-1/-2 [MPa]	Strain at break at 23 °C ISO 527-1/-2 [%]	Charpy unnotched impact strength at 23 °C ISO 179/1eU [kJ/m ²]	Charpy notched impact strength at 23 °C ISO 179/1eA [kJ/m ²]
T6340G6	11,000 / cond. 9,100	145 / cond. 110	2.5 / cond. 3.3	65 / cond. 62	10 / cond. 10
T6300G7	- / -	200 / -	3 / -	- / -	- / -

Processing

Ultramid®	Melt temperature injection molding [°C]	Mold temperature injection molding [°C]
T6340G6	285-300	90-110
T6300G7	270-310	85-100

- Easy processing at low mold temperatures enable the products to be **hot water moldable**
- Mold temperatures PA66 (80–90°C) << Ultramid® T6000 (90–110°C) << PA6T/66 (120–160°C)



Ultramid® T6000

Product portfolio and applications

	Ultramid®	Reinforcement	Colors
Flame retardant	T6340G6	30 % GF	LS bk, un, grey, orange, white
Glass-fiber reinforced	T6300G7	35 % GF	Bk

Please check regional availability with your BASF contact.

Possible applications

For mainly E&E applications:

- Connectors
- High-voltage connectors
- MCBs, MCCBs
- Electric powertrain
- Consumer electronics
- Electric shower

Ultramid® T6300G7 with high purity for fuel cell components.



The right material for the right part: choose the suitable material for your application!
PPA Product Selector on www.ppa.basf.com

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. (March 2024)

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