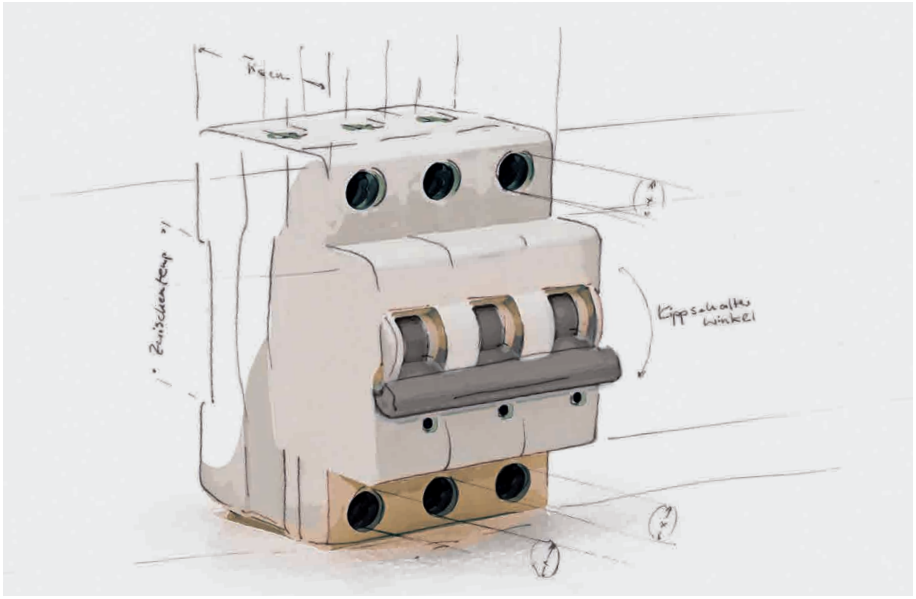
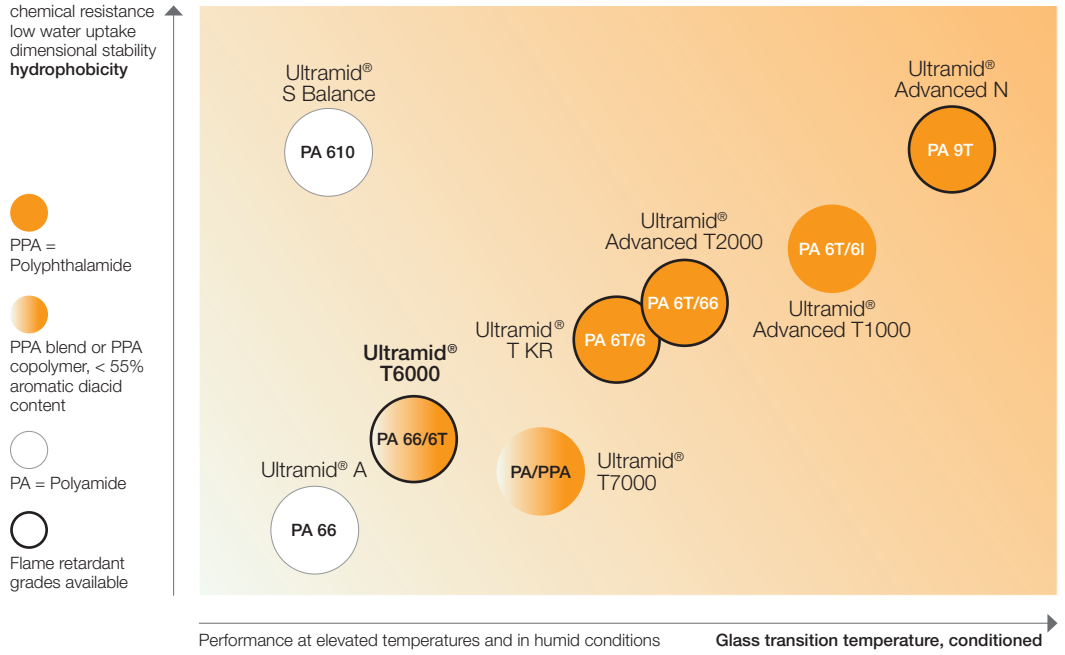
Bridging the gap between PA and PPA for E&E applications

BASF
We create chemistry

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.

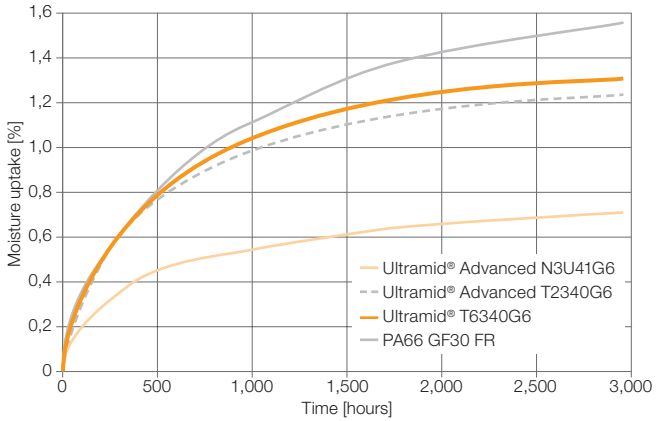




ULTRAMID® T600

Ultramid® T6340G6

- V-0 UL rating at 0.4 mm
- High RTI values of up to 150 °C
- CTI of 600 V
- GWFI: 960 °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.

Grey RAL 7035	White RAL 9003	Orange RAL 2003

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

High dimensional stability

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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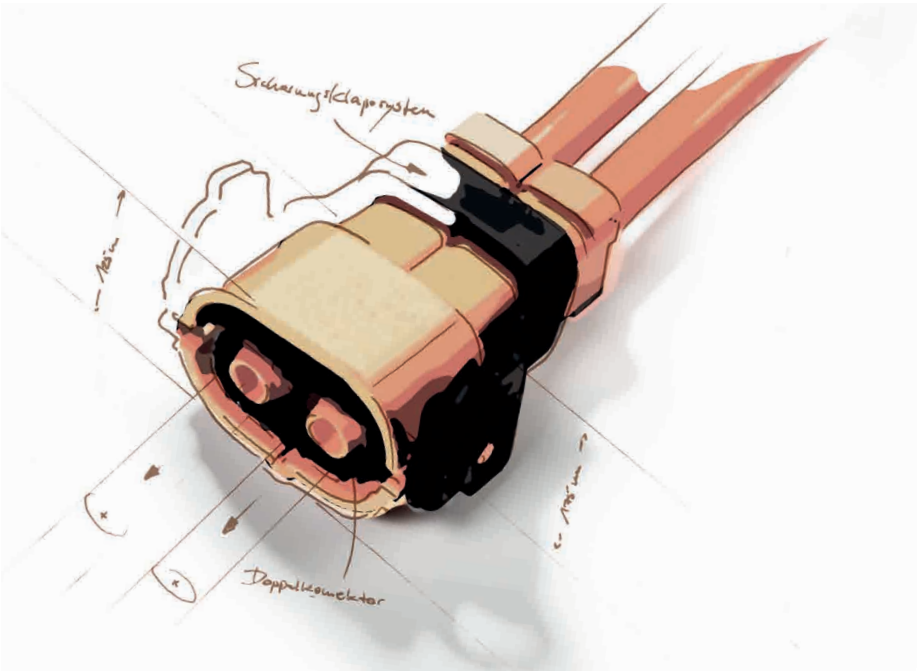
Mechanical properties

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/m²]	Charpy notched impact strength at 23 °C ISO 179/1eA [kJ/m²]
T6340G6	11,000 / cond. 9,100	145 / cond. 110	2.5 / cond. 3.3	65 / cond. 62	10 / cond. 10
T6300EG7	11,600 / –	215 / –	2.8 / –	70 / –	13 / –

Processing

Ultramid®	Melt temperature injection molding [°C]	Mold temperature injection molding [°C]
T6340G6	285-300	90-110
T6300EG7	290-310	80-120

- Easy processing at low mold temperatures enable the products to be **hot water moldable**
- Mold temperatures PA66 (80–90°C) << Ultramid® T6000 (80-120°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
Flame retardant, toughened	T6345G6	30 % GF	LS bk
Glass-fiber reinforced	T6300EG7	35 % GF	Bk, orange
	T6300HG7	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® T6300HG7 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

For further questions please contact the Ultra-Infopoint: +49 621 60-78780 / ultraplaste.infopoint@basf.com

www.ppa.basf.com

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