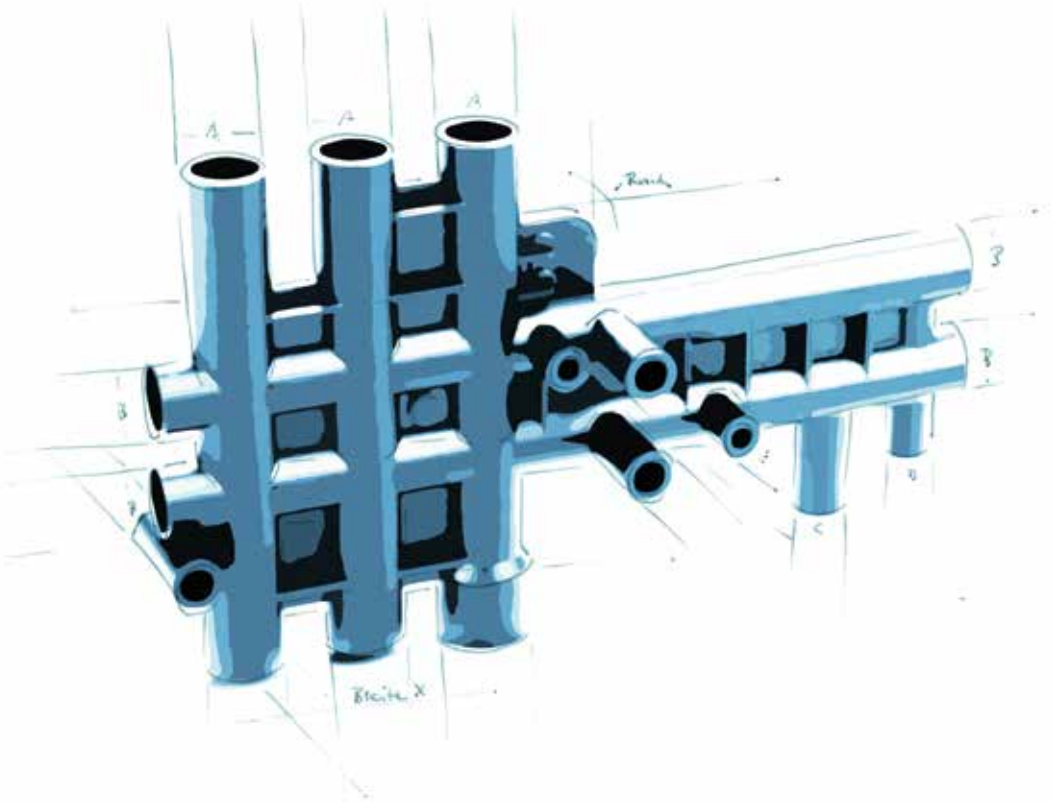
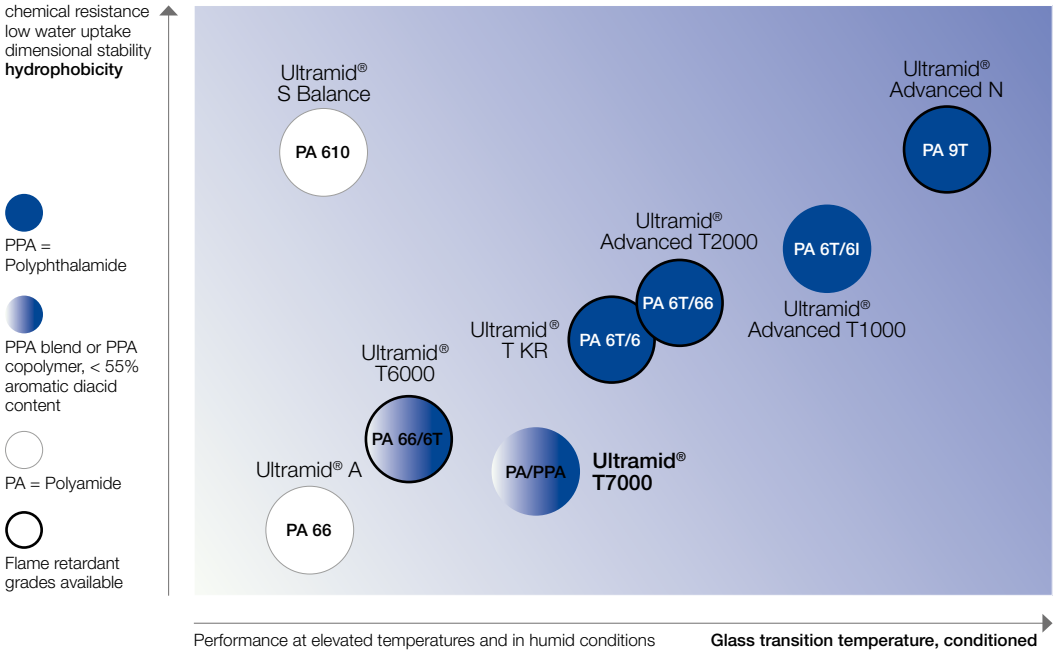
Bridging the gap between PA & PPA for metal replacement

Ultramid® T7000

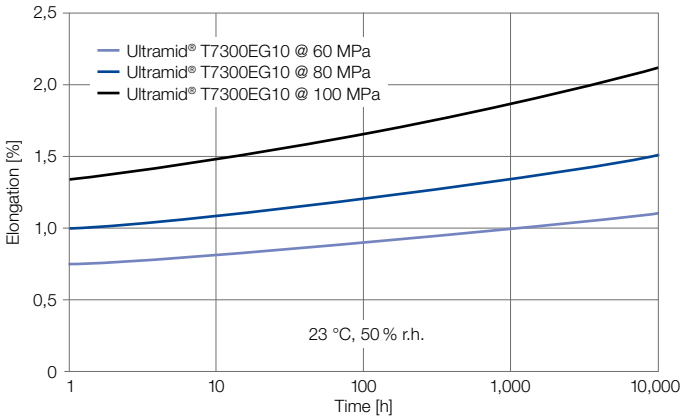
BASF
We create chemistry

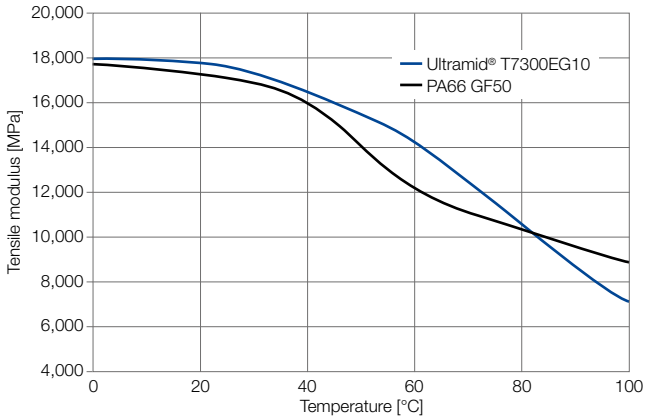
Ultramid® T7000 outperforms PA66 in mechanical properties in dry state and especially in presence of humidity up to a temperature of 80°C. The unique combination of properties of this PA/PPA blend is perfectly suited for metal replacement. The material has a high stiffness and strength. The polyphthalamide part leads to a low moisture absorption, which gives the components an excellent dimensional stability. It is easily processable for injection molding with an excellent surface finish.





ULTRAMID® T700





Product	T_m [°C]	E-modulus ISO 527 [MPa]	Tensile strength ISO 527 [MPa]	Elong. at break ISO 527 [MPa]
Ultramid® Advanced T1000HG10 (6T/6I GF50)	**320**	19,000/ **19,000**	280/**260**	2.2/**2.0**
T7300EG10 (PPA blend GF50)	**250**	17,700/ **16,600**	255/**210**	2.8/**3.0**
A3WG10 (PA66 GF50)	**260**	16,800/ **12,500**	240/**180**	2.5/**3.5**

Good creep behaviour as PA66

- Withstands high and continuous mechanical loads with minimal creep
- Typical disadvantage of plastic for creeping is reduced significantly

Higher stiffness and strength than PA66 up to 80°C

- Ultramid® T7000 stiffer and stronger than PA66 for most temperatures
- Perfectly suited for metal replacement of parts which are exposed to moisture

Bridging the gap between PA66 and PPA

Ultramid® T7000 is bridging the gap between PA66 and PPA grades for key properties, also in conditioned state.

Stable mechanics at elevated temperatures

High dimensional stability

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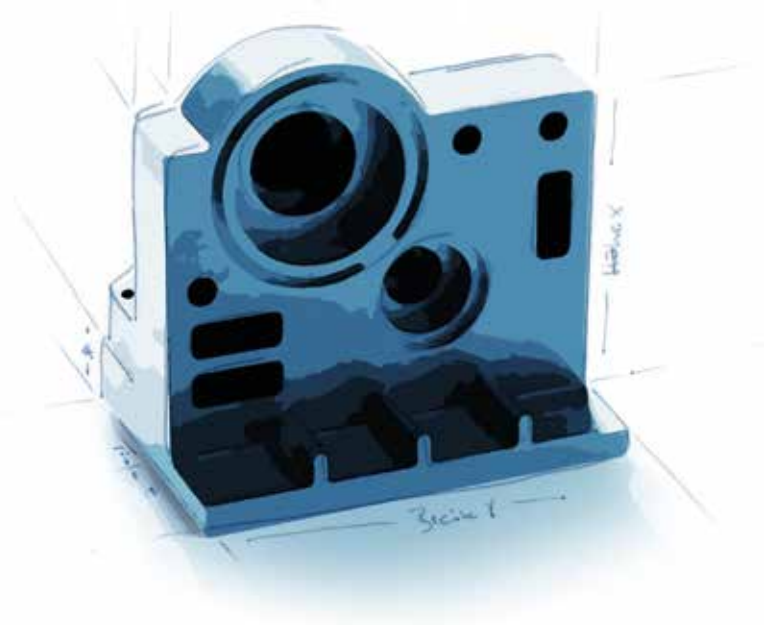
Mechanical properties

Ultramid® T7000	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]
EG8	13,000 / cond. 12,300	225 / cond. 175	3.1 / cond. 3.1	90 / cond. 85	12 / cond. 12
EG10	17,700 / cond. 16,600	255 / cond. 210	2.8 / cond. 3.0	108 / cond. 100	15 / cond. 15
EG12	22,000 / cond. 20,000	265 / cond. 215	2.4 / cond. 3.0	97 / cond. 92	16 / cond. 16
ZG10	15,800 / cond. 14,500	220 / cond. 170	3.1 / cond. 3.9	108 / cond. 100	19 / cond. 14

Processing

Ultramid® T7000	Melt temperature injection molding [°C]	Mold temperature injection molding [°C]
EG8	290-310	80-120
EG10	300-320	80-120
EG12	300-320	80-120
ZG10	300-320	80-120



Ultramid® T7000
Product portfolio and applications

	Ultramid®	Reinforcement
Glass-fiber reinforced	T7300EG8	40 % GF
	T7300EG10	50 % GF
	T7300EG12	60 % GF
Impact modified	T7300ZG10	50 % GF
Low Product Carbon Footprint*	T7300EG10 Bio-Mass Balance (BMB)	50 % GF
	T7300EG10 ChemCycling™ (Ccycled)	50 % GF

Available in laser sensitive black, surface improved black and uncolored.
Please check regional availability with your BASF contact.
*REDcert. No ISCC PLUS available.

Further grades on request. Please contact us.

Applications

- Structural components in automotive, e.g., mirror brackets or air brake parts
- Furniture parts
- Sanitary components
- Water meters

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

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