

# One T for 1000 tasks

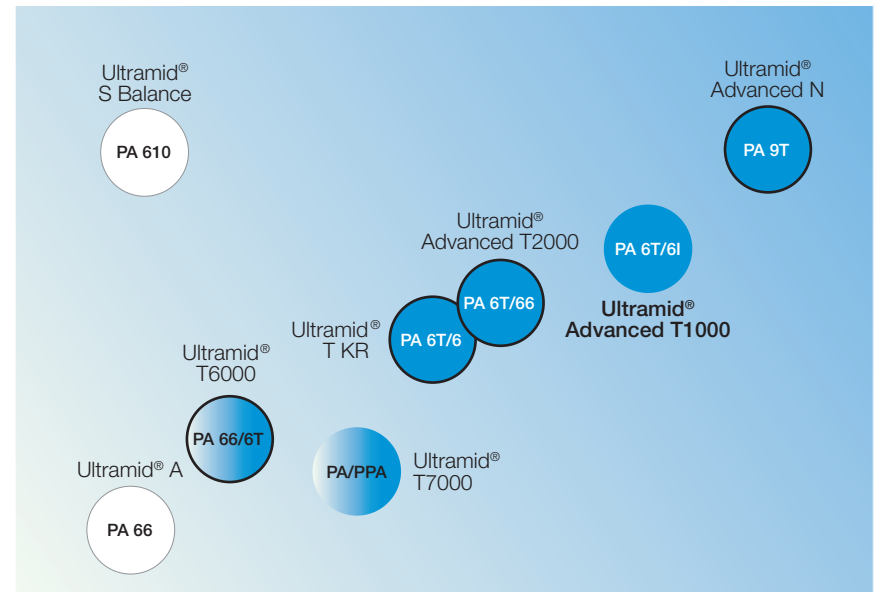
## Strong and stable – the PPA Ultramid® Advanced T1000

Ultramid® Advanced T1000 comprises the strongest and stiffest products of the Ultramid® (PA) family with stable mechanical properties up to temperatures of about 120 °C. Due to its partially aromatic chemical structure the PA 6T/6I offers high resistance against humidity and contact with challenging media – outperforming standard polyamides and many other PPA materials.



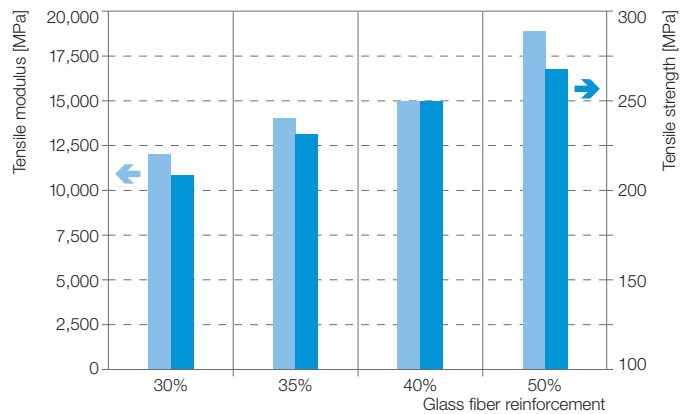
chemical resistance  
low water uptake  
dimensional stability  
**hydrophobicity**

- PPA = Polyphthalamide
- PPA blend or PPA copolymer, < 55% aromatic diacid content
- PA = Polyamide
- Flame retardant grades available



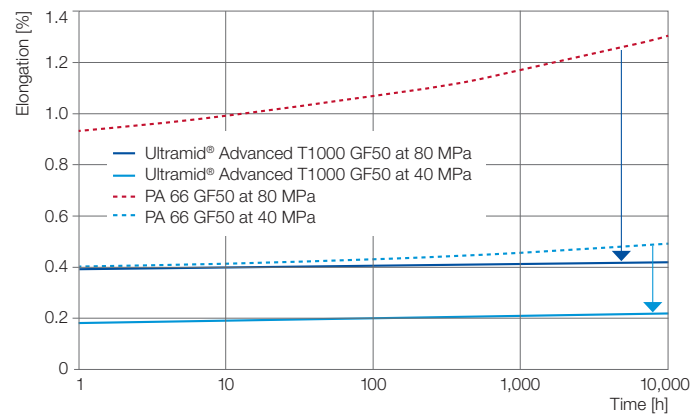
Performance at elevated temperatures and in humid conditions      Glass transition temperature, conditioned

# ULTRAMID® ADV



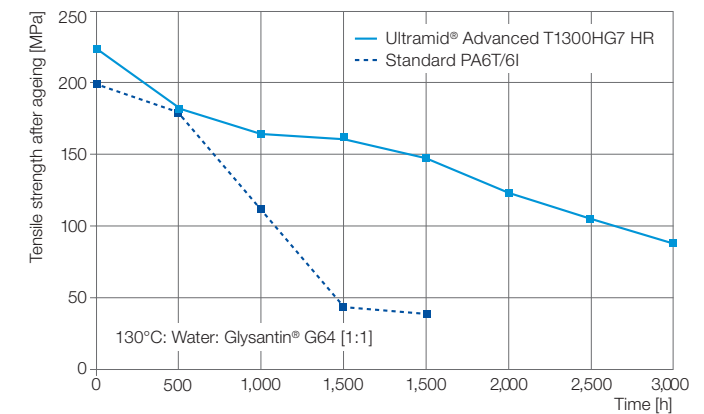
## Outstanding stiffness and strength

- Reinforcement from 30 % to 50 % GF
- Perfectly suited for metal replacement in challenging environments
- For highly stressed parts



## Low creep and high resistance to fatigue

- Withstands high and continuous mechanical loads with minimal creep
- High resistance to cyclic mechanical loads (fatigue)
- Typical disadvantage of plastic for creeping is reduced significantly



## HR-improved grade

- Better resistance to many challenging media such as glycol/water
- Many different applications possible, e.g., in thermal management, like pumps or thermostat housings



Stable mechanics at elevated temperatures



High dimensional stability



High dimensional stability



Outstanding chemical resistance

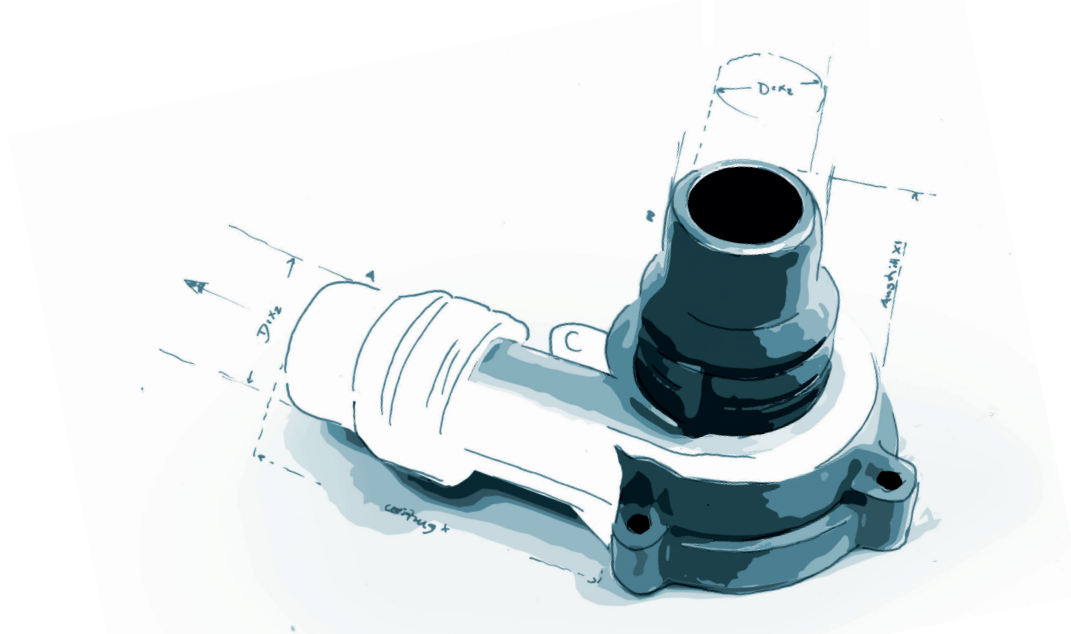
# Advanced T1000

## Mechanical properties

Ultramid® Advanced	T <sub>g</sub> [°C]	T <sub>m</sub> [°C]	HDT A ISO 75 [°C]	Specific gravity ISO 1183 [g/cm³]	E-modulus ISO 527 [MPa]	Tensile strength ISO 527 [MPa]	Elong. at break ISO 527 [%]	Charpy unnotched ISO 179/1eA [kJ/m²]	Charpy notched ISO 179/1eA [kJ/m²]
T1000HG6	125	325	> 275	1.44	23 °C: 11,800 80 °C / cond. 11,000 170 °C: 3,700	23 °C: 200 80 °C / cond. 175 170 °C: 65	2.1	55	8
T1000HG7	125	325	> 280	1.49	23 °C: 13,500 80 °C / cond. 12,000 170 °C: 5,000	23 °C: 230 80 °C / cond. 145 170 °C: 75	2.2	70	10
T1000HG8	125	325	> 280	1.53	23 °C: 15,100 80 °C / cond. 12,900 170 °C: 4,800	23 °C: 245 80 °C / cond. 145 170 °C: 75	2.1	75	11
T1000HG10	125	325	> 280	1.64	23 °C: 19,400 80 °C / cond. 17,500 170 °C: 7,000	23 °C: 280 80 °C / cond. 200 170 °C: 85	2.0	95	13

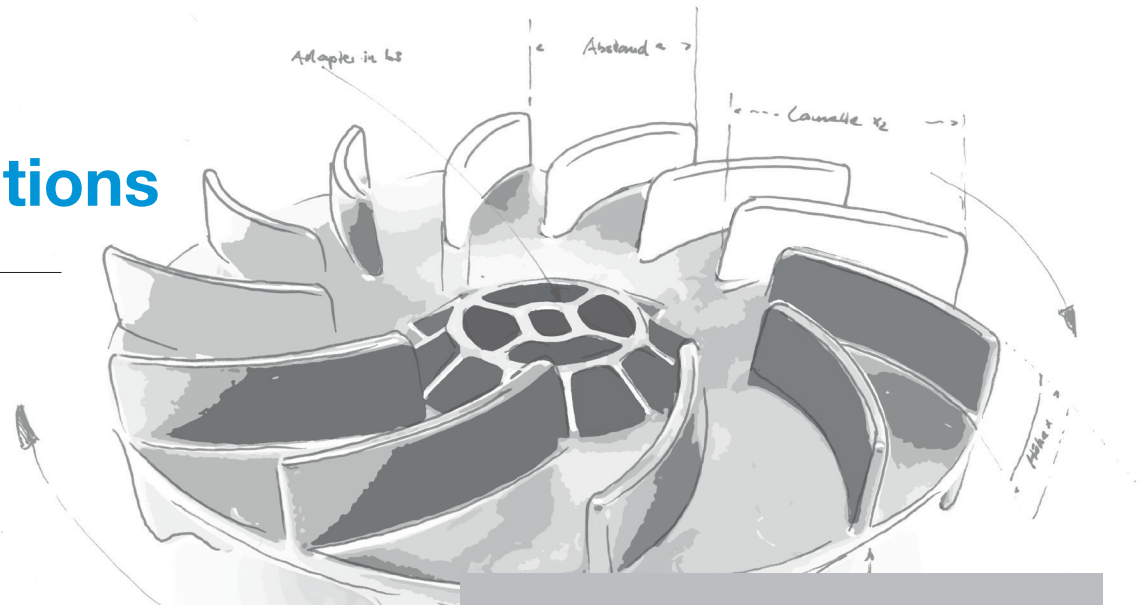
## Processing

Ultramid® Advanced	Melt temperature [°C]	Mold temperature [°C]
T1000HG6	335-355	140-170
T1000HG10	345-355	150-190



# Ultramid® Advanced T1000

## Product portfolio and applications



	Ultramid® Advanced	Reinforcement	Stabilization	Colors
Glass-fiber reinforced	T1000HG6	30 % GF	standard (H)	LS bk, un*
	T1000HG7	35 % GF	standard (H)	LS bk, un*
	T1000HG8	40 % GF	standard (H)	LS bk, un*
	T1000HG10	50 % GF	standard (H)	LS bk, un*
Laser Transparent	T1300EG7 LT	35 % GF	standard (E)	Bk, un*
Hydrolysis Resistant	T1300HG7 HR	35 % GF	standard (H)	LS bk
Electronic Quality	T1300EG7 EQ	35 % GF	standard (E)	LS bk

LS: laser sensitive; \* uncolored grades with standard (E) stabilizer.

## For demanding applications

- Electric powertrain (e.g., e-motor parts)
- Fuel cell (e.g., humidifier)
- Vehicle sensors
- Motors & actuators
- Thermal management (e.g., pumps)
- Structural parts



The right material for the right part: choose the suitable material for your application!  
**PPA Product Selector on [www.ppa.basf.com](http://www.ppa.basf.com)**

### Note

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