

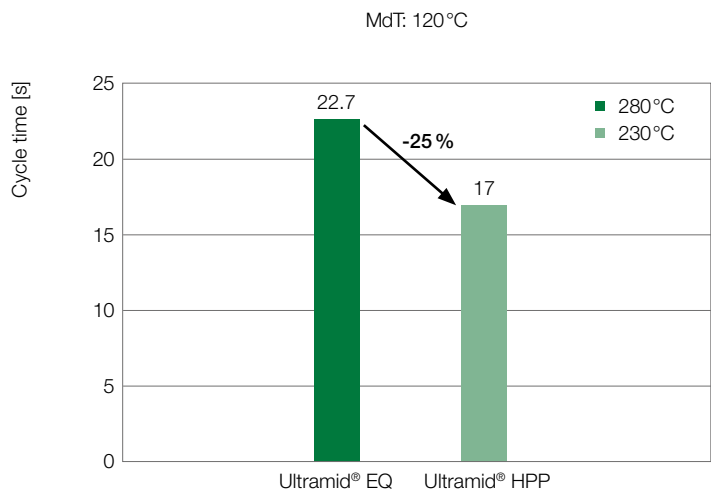


We create chemistry

# Ultramid® HPP and Ultradur® HPP

HPP = High Productivity Plus

Energy efficiency is an increasingly important aspect to consider, both from an economic and ecological perspective. The cycle time of the injection molding process plays a major role for the highlighted properties. To this end, BASF has developed Ultramid® and Ultradur® HPP, known as High Productivity Plus, which leads to **significant reductions in cycle time** and process **energy consumption**. First tests show a potential reduction of the cycle time around 30%.



*Proven cycle time reduction by 25% on model part, reduction up to 30% shown in customer trials.*

Ultramid® HPP and Ultradur® HPP – the next generation of engineering plastics with unmatched performance boost

Ultramid® HPP

Ultradur® HPP

- Excellent flowability
- Faster crystallization

+ CTI 600

+ Higher HDT

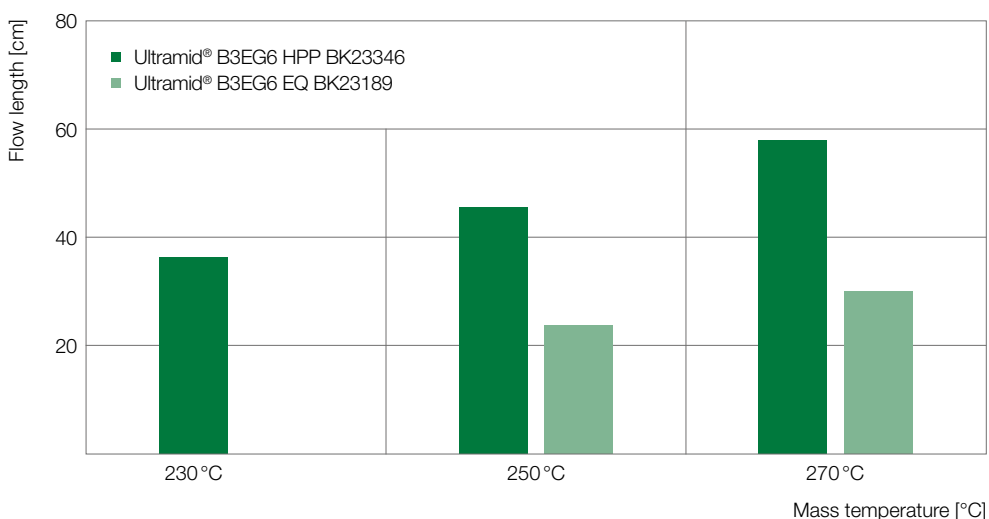
## Ultramid® HPP – Properties

	Unit	Ultramid® B3EG6 HPP UN	Ultramid® B3EG6 UN
MVR at 275 °C and 5 kg	cm <sup>3</sup> /10min	105	35
Density	g/cm <sup>3</sup>	1,300	1,300
Moisture absorption, 23 °C/50 % r.h.	8	1.9-2.3	1.9-2.3
Tensile modulus	MPa	9,800/6,300	9,500/6,200
Stress at break	MPa	185/110	185/115
Strain at break	8	3.4/6.4	3.5/8
Charpy unnotched impact strength (23 °C)	kJ/m <sup>2</sup>	85/95	95/100
Charpy unnotched impact strength (-30 °C)	kJ/m <sup>2</sup>	55/55	80/-
Charpy notched impact strength (23 °C)	kJ/m <sup>2</sup>	12/17	15/30
Charpy notched impact strength (-30 °C)	kJ/m <sup>2</sup>	10/10	11/-
HDT A (1.80 MPa)	°C	210	210
HDT B (0.45 MPa)	°C	220	220

Ultramid® HPP is a high-performance thermoplastic resin that shows outstanding flowability, faster crystallization and ability to be processed at lower melt temperatures making it an ideal choice for manufacturers and product designers who demand the very best in terms of efficiency and performance.

Ultramid®'s ability to be processed at lower melt temperatures makes it a more sustainable choice. Additionally, this resin requires lower injection pressure, which reduces wear and tear on equipment and extends the lifespan of molds and other components.

With its rating of CTI 600 (also for black), Ultramid® is suitable for use in a wide range of electrical and electronic applications. It also offers excellent laser marking capabilities at 1064 nm.



*Material comparison of two different Ultramid® grades. At 250 °C significant increase of the flow length of the new Ultramid® HPP grade versus Ultramid® EQ grade.*

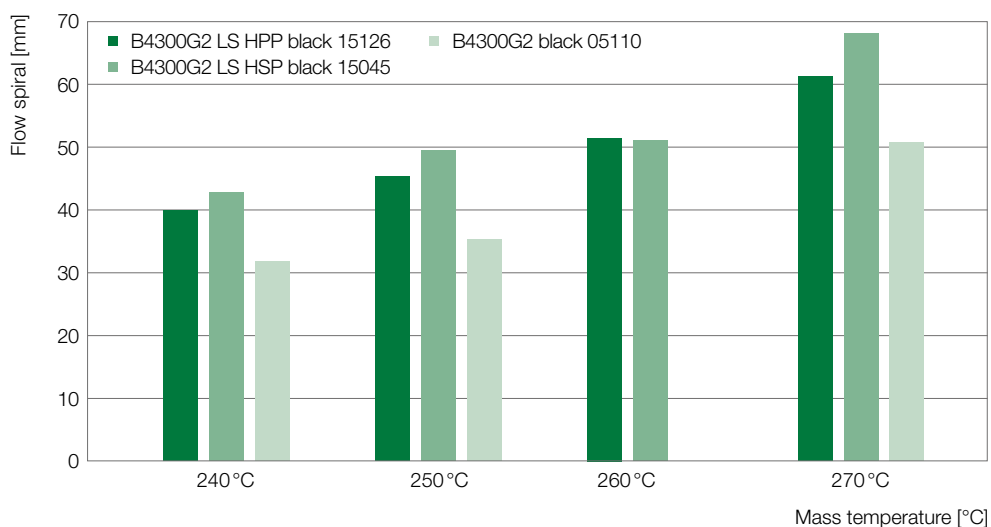
## Ultradur® HPP – Properties

	Unit	Ultradur® Exp. B4300G4 HPP LS BK15126	Ultradur® B4300G4 HSP UN
MVR at 250°C and 2.16 kg	m <sup>3</sup> /10min	17	22
Density	g/cm <sup>3</sup>	1,464	1,450
Tensile modulus	MPa	7,240	7,200
Stress at break	MPa	120.7	115
Strain at break	%	3.3	3.3
Charpy unnotched impact strength (23 °C)	kJ/m <sup>2</sup>	44.5	45
Charpy unnotched impact strength (-30 °C)	kJ/m <sup>2</sup>	38.8	40
Charpy notched impact strength (23 °C)	kJ/m <sup>2</sup>	6.3	6
Charpy notched impact strength (-30 °C)	kJ/m <sup>2</sup>	6	–

Ultradur® HPP is an easy-flowing injection-molding grade with different glass fiber content for industrial parts with high dimensional stability requirements, for example for internal applications for vehicles, plug-in connectors and housings.

Measuring the polymer's resistance to distortion under a given load at an elevated temperature, Ultradur® HPP shows very high HDT (heat deflection temperature) values.

For manufacturers, a comprehensive moldflow data set is available, which helps to ensure optimal performance and efficiency throughout the production process.



*Excellent flowability even at low mass temperatures down to 240 °C.*

*Noticeable improvements in flowability compared to standard Ultradur® grades.*

For technical queries relating to Ultramid® and Ultradur® please contact:



Please visit our websites  
[ultramid.com](http://ultramid.com)  
[ultradur.com](http://ultradur.com)  
[plastics.basf.com](http://plastics.basf.com)