Ultramid® Advanced N: New polyphthalamide portfolio for sophisticated components in the automotive and electronics industries

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BASF
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BASF: a pioneer in the polyamide (PA) and polyphthalamide (PPA) market

Major trends across various industries:

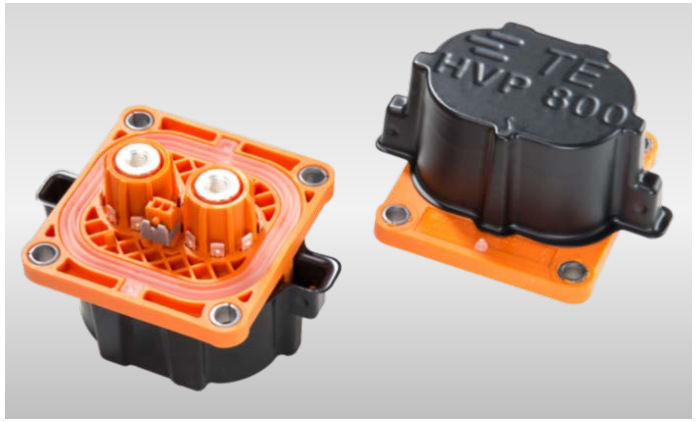
- Miniaturization
- Increased functionality and functional integration
- Improved durability, quality and overall performance

Today: BASF launches Ultramid® Advanced N, a long-chain PPA, to address customer needs for high performance materials

BASF offers solutions for challenging applications

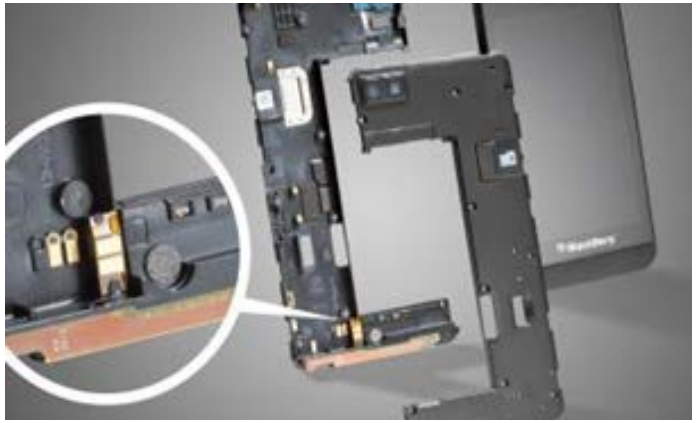
Automotive

- Gear wheels
- Fuel quick connectors
- Thermostat housings
- Structural parts



E and E

- Connectors
- Surface Mount Devices (SMD)
- Switches & circuit breakers
- LED lighting



Consumer

- Jacks in mobile devices
- Appliance components
- Parts for mobile phones, tablets and laptops

Ultramid® Advanced N: the new long-chain PPA by BASF

Ultramid® Advanced N offers

- Stable mechanical properties at elevated temperatures
- Excellent dimensional stability
- Outstanding chemical resistance for longer performance
- Better processing compared to standard PPA

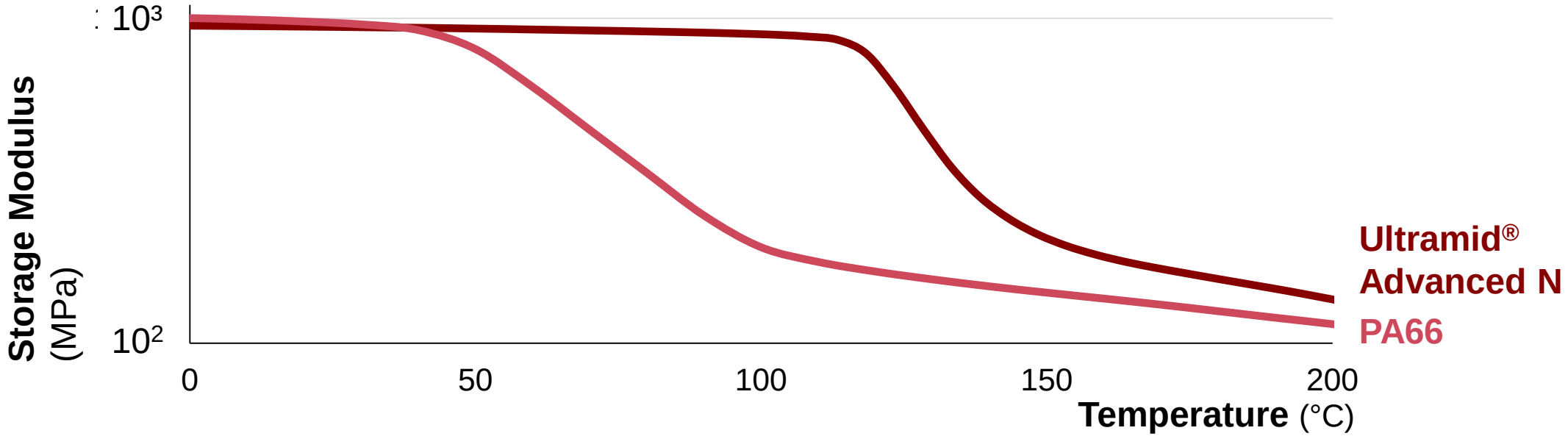
Broad portfolio

- Unreinforced
- Different glass fiber reinforcements
- Heat stabilizers according to target industry
- Flame retardant packages
- Special grades

Ultramid® Advanced N: stable mechanical properties over a broad temperature range

Dynamic-mechanical analysis, ISO 6721-7: tested dry as molded

Comparison of Ultramid® Advanced N with a corresponding PA66



Ultramid® Advanced N: outstanding chemical resistance

Ultramid® Advanced N is resistant to

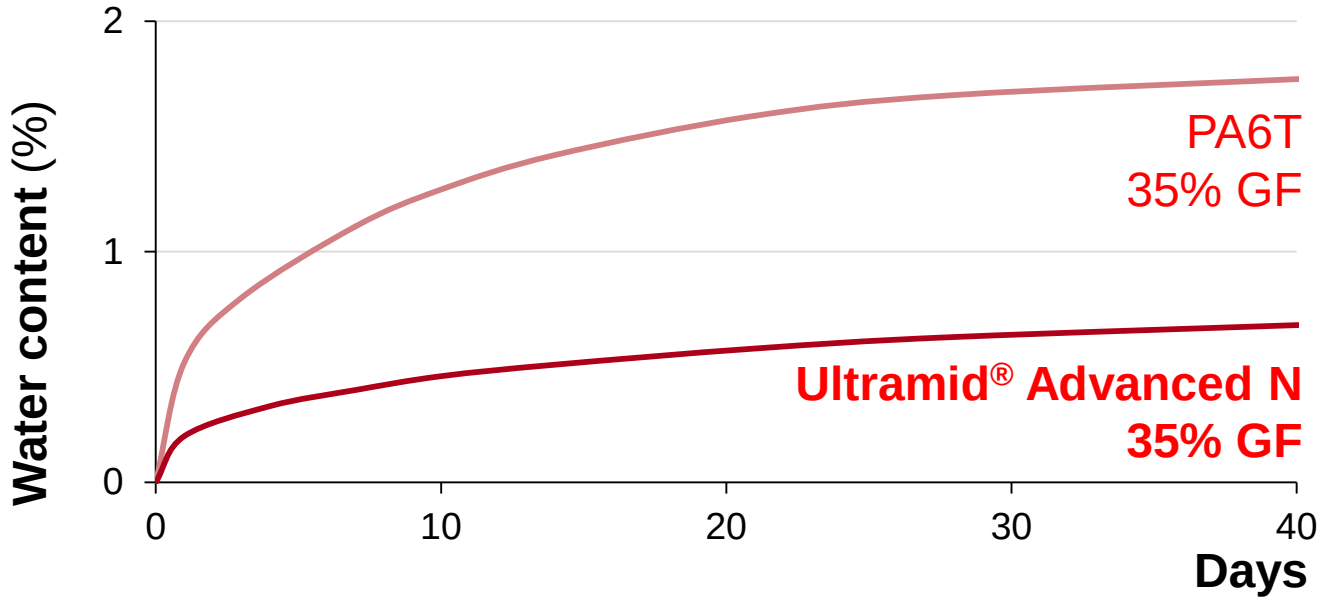
- Hot oil
- Glysantin® in water (up to 135°C!)
- Calcium chloride ($CaCl_2$)
- Aggressive fuels (e. g. with high methanol contents)
- Acids (better than other PPAs)

Ultramid® Advanced N is suitable for applications in contact with aggressive media

Ultramid® Advanced N:
very low water uptake, best choice for lead-free soldering

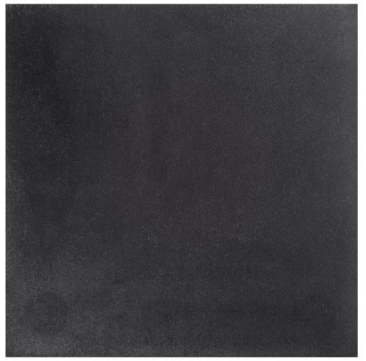
Moisture uptake test at 70ºC and 62% relative humidity

Comparison of Ultramid® Advanced N to PA6T (both 35% GF)



Test sample made of PA6T, 35%GF: blistering

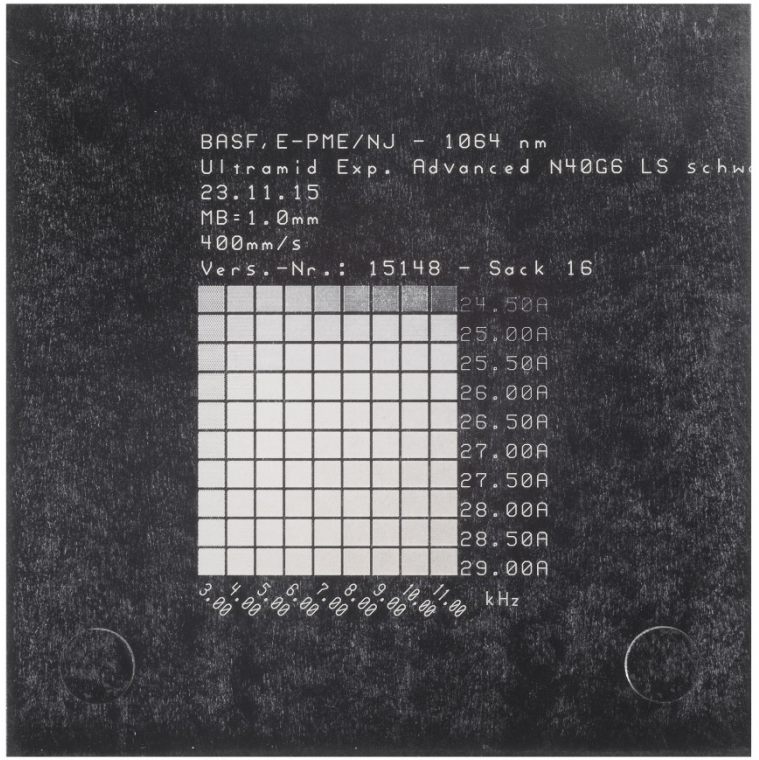
Test sample made of Ultramid® Advanced N, 35% GF: no blistering



- Ultramid® Advanced N demonstrates high dimensional stability due to lower water uptake
- Ultramid® Advanced N fulfills up to JEDEC Class 1 – no blistering during lead-free soldering

Ultramid® Advanced N: outstanding flame retardant grades

- Flame retardant free of halogens
- “V-0” rating (UL 94 test) at 0.4 mm for miniaturized parts
- Excellent electrical properties – highest CTI class
- Optimized for less corrosion and low migration
- Laser-sensitive grades available



Test sample made of Ultramid® Advanced N, laser-marked

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