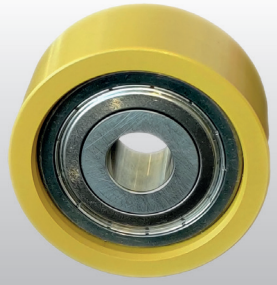

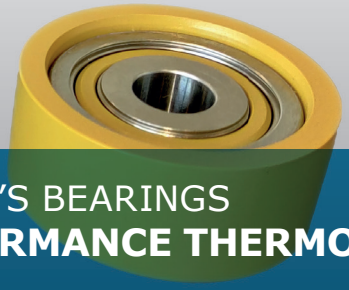

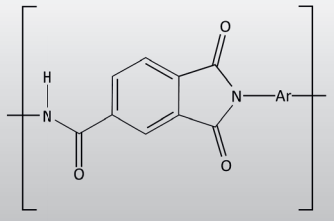

Torlon® PAI FOR JESA'S BEARINGS
VERY HIGH PERFORMANCE THERMOPLASTIC

jesa. bearing solutions

FUNCTIONS AND USES

Polyamide-imide Torlon® PAI is a melt processable plastic with outstanding mechanical properties, combining advantages of metals (high strength, low creep, high wear resistance) and those of plastics (high elongation, low density, processing complex shapes).
Torlon® PAI is characterised by very high thermal stability with incomparable mechanical and chemical resistance compared to other advanced engineering plastics.
The intrinsec properties of this material make it an effective alternative to metal in high-temperature friction and wear applications.

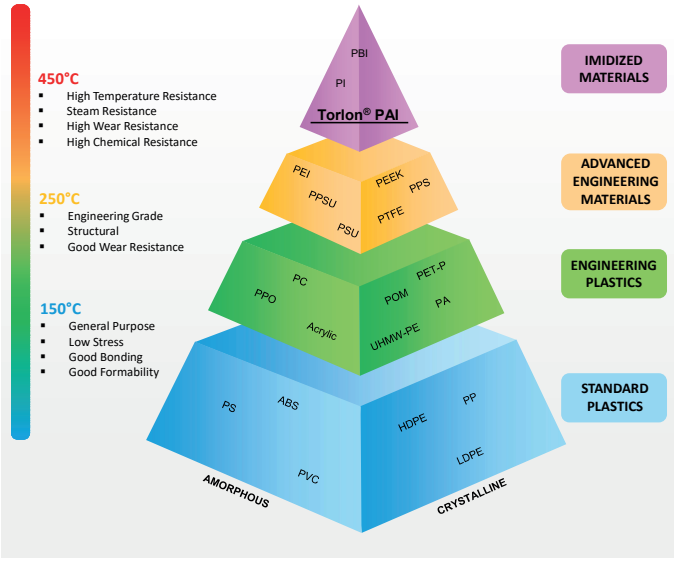

Figure1: Amorphous and crystalline thermoplastics

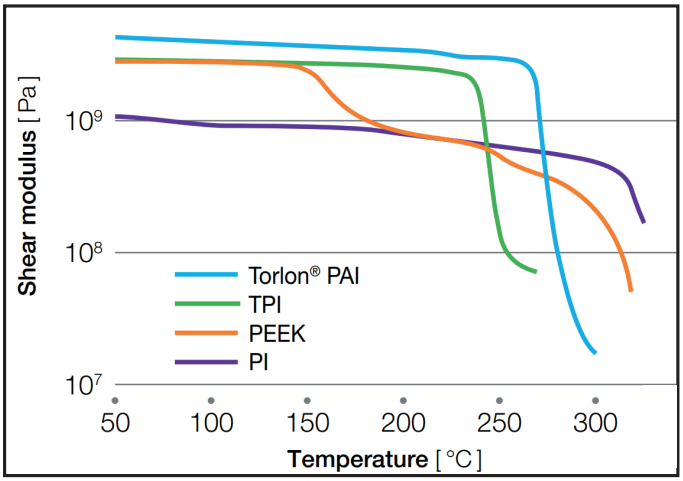

Figure2: Mechanical performance at high temperature

A UNIQUE EXPERTISE

This material is usually machined, but it is also possible to shape it through a complex injection molding. The long experience of JESA in this field allows us to offer a new range of bearings overmoled with Torlon® PAI. This process has the advantage to provide tailor-made solutions with the possibility of making very complicated shapes. Another asset of injection overmolding is the cost reduction due to the wasted machining chips saving.
JESA is one of the very few companies in the world with a mastery of this process.

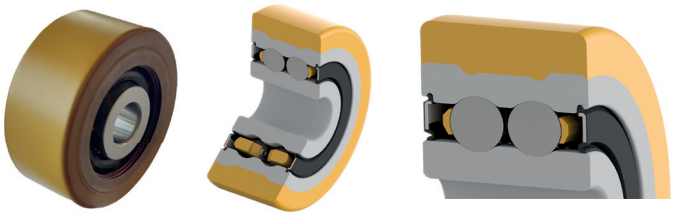

Figure3: Picture & 3D rendering of Torlon® PAI overmolded bearing

TECHNICAL SPECIFICATIONS

Density	1,40 – 1,61 gr/cm3
Tensile Strength	Up to 200 MPa
Tensile modulus	Up to 20 GPa
Flexural modulus	5 - 20 GPa @23°C 3,6 - 15 GPa @230°C
Heat Deflection Temperature	278 - 282°C

SOLUTION ADVANTAGES

- Torlon® PAI can be machined and injected
- High-end tailor-made solution
- Save chips's costs when Torlon® PAI is injected
- Very high strength and stiffness to +275 °C
- Superior toughness from cryogenic to +275 °C
- Exceptional wear resistance
- Resistant to strong acids and most organics
- Inherent flame resistance

APPLICATIONS

- Aeronautics and aerospace industries
- Automotive industry
- Electrical and electronics industries
- Pumps industry
- Medical and pharmaceutical Industries
- Beverage industry

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