

PEEK AND PAI THERMOPLASTICS



Transmission development is also a focus for emissions reduction. Dual-clutch transmissions or automatic transmissions with eight or more gears not only increase the efficiency of the drivetrain but also create new challenges.

Higher load generation is one major challenge of dual-clutch transmissions and seals from Freudenberg Sealing Technologies made from PEEK (polyetheretherketone) or PAI (polyamideimide), in conjunction with our low-torque design, are a dependable solution to high load pressure.

VALUES TO THE CUSTOMER

PEEK and PAI are available for load profiles above 35 MPa m/s which occur in dual clutch transmissions. Freudenberg Sealing Technologies uses PEEK and PAI materials in its own seal designs to keep power dissipation and leakage rates low even at high PV values.

Freudenberg Sealing Technologies PEEK and PAI products:

- Demonstrate a consistent, friction-optimized profile for maximum pressure relief which results in very little heat input at the sealing point
- Reduce leakage in the lock area to a minimum with PEEK and PAI 3-D lock-in rings

Fuel Consumption is minimized because:

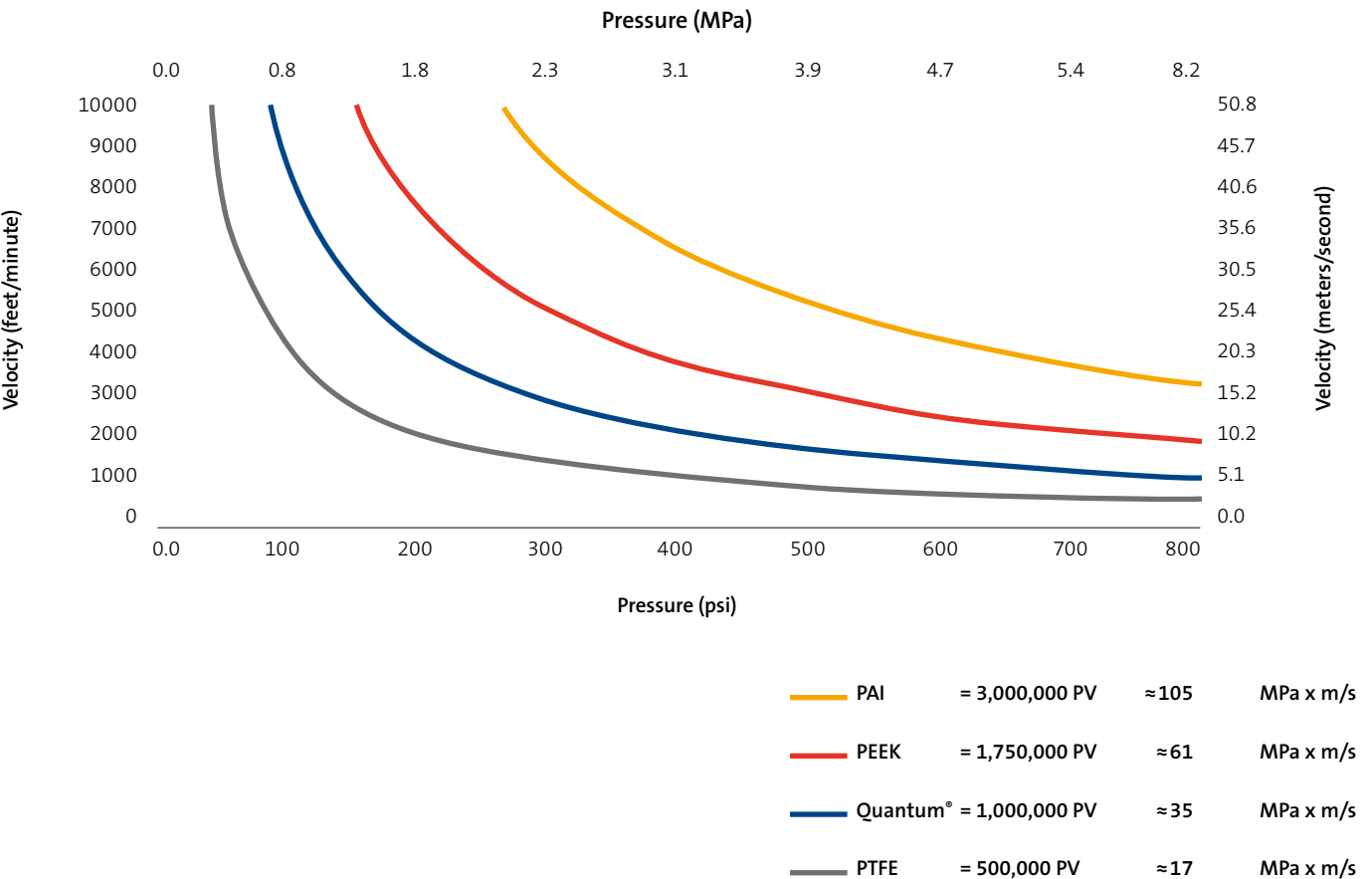
- The profile cross-section in PEEK and PAI seals relieves pressure and reduces friction
- The 3-D ring lock for PEEK or PAI seal rings is designed to minimize leakage

FEATURES AND BENEFITS

Optimal Material Selection for Application

To fully take advantage of each seal material, it is crucial to consider the choice of materials in terms of their technological and economic parameters and discriminate between them. As a basis for the determination, the PV value — the product of oil pressure (P) and the relative sliding speed (V) between the shaft and the relative sliding speed (V) — is the proven way to describe the load profile.

A complete portfolio of materials listed below is available from Freudenberg Sealing Technologies for specific application requirements.



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