

POLYURETHANE PROFILES

Freudenberg Sealing Technologies high-performance profiles have outstanding durability properties due to their incredible wear resistance and excellent structural tenacity. This means that they offer the best prerequisites for developing tailor-made materials for precision profiles which have proven valuable in highly dynamic applications.

Common functions are:

- Protecting the glass scale and laser head of linear precision measurement systems in machine tools
- Wiping off metal chips and coolants from the telescopic coverings of machine tools, thus protecting the costly high precision guides and drives inside
- Transmitting power from internal drive elements to external working slides in linear actuators by means of steel or Kevlar cords that are completely embedded in the PU profiles
- Customized solutions with tailor-made profiles, joint into rings by welding technology, and/or “Clip & Seal” techniques in products for wind turbines

VALUES FOR THE CUSTOMER

Freudenberg Sealing Technologies polyurethane materials are desired in precision sealing profiles due to their:

- Resistance to wear and abrasion, even when in contact with typical zinc flame-sprayed surfaces and under poor lubrication conditions
- Increased durability with resistance to mineral oils
- Superior properties across a wide temperature range
- Enhanced tensile strength
- Extreme flexibility even in low temperature conditions
- Superior resistance to crack formation and crack growth

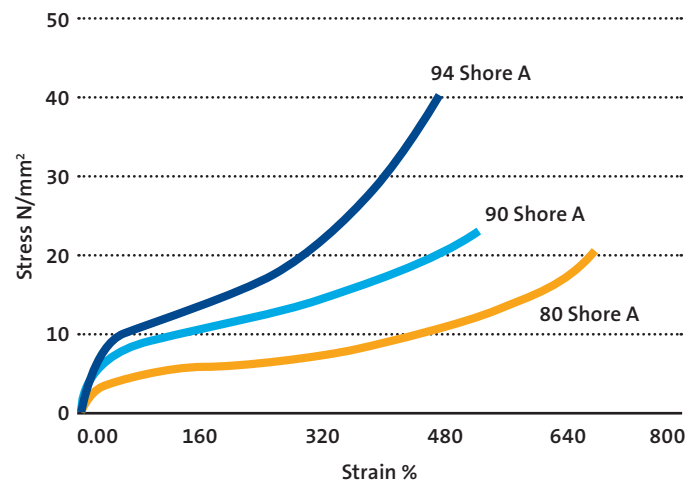
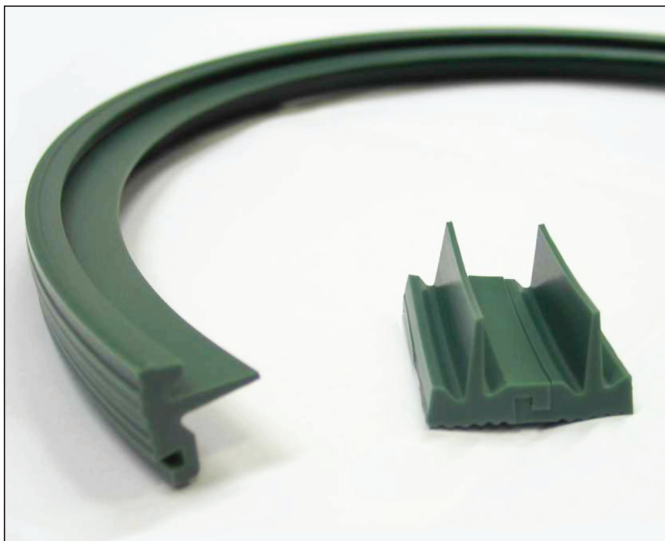
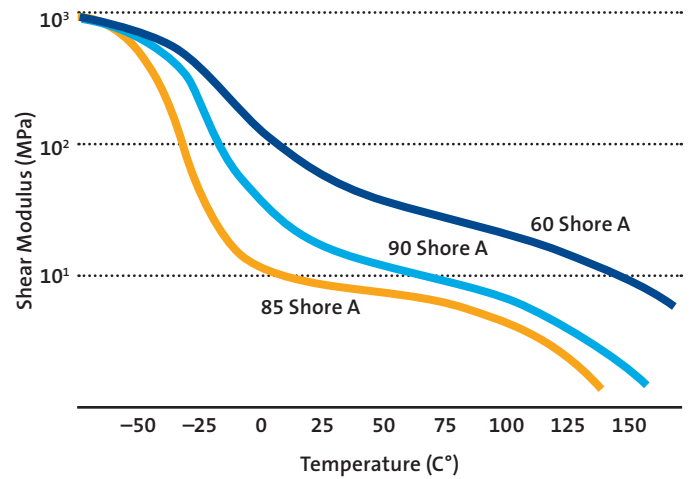
The above-mentioned properties of Freudenberg Sealing Technologies polyurethane make it possible to design high-precision profiles considerably smaller than ordinary elastomer profiles, delivering cost-effective, space-saving, robust constructions with a long service life and highly efficient sealing capabilities.



FEATURES AND BENEFITS

Polyurethane profiles from Freudenberg Sealing Technologies are innovative and efficient, often allowing the integration of multiple functions into one profile. With good media compatibility, tear strength, low friction, and high abrasion resistance, polyurethane is an ideal material for use in transmission sealing, fluid power technology, and general mechanical engineering applications. Custom sealing profiles can be precision-manufactured to tolerances within a tenth of a millimeter.

The spectrum of material properties can be adapted to specific sealing requirements. Targeted modifications of basic properties such as material hardness, the shape of the modulus-temperature progression, and stress/strain relations can be achieved by alterations of the chemical formulation.



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