

Materials (sealing elements)

Materials of construction meant for use in sealing and guiding applications are expected to have outstanding mechanical and chemical characteristics.

1. lowest permanent deformation (good compression set)
2. high abrasion resistance and low wear
3. good temperature stability
4. good compatibility with pressure medium
5. excellent mechanical characteristics.

Materials used in manufacture of HME sealing systems undergo constant and stringent quality checks. This assists in enhancing the function and service life of the seals. HME seals are regularly produced from one or more of the following materials:

Fiber elastomer combinations

These materials are used in very demanding application environments. They display good pressure, abrasion and flow resistance and good anti stick slip behaviour.

Elastomer blends from natural or synthetic Rubber

These materials are used in manufacture of sealing elements that call for high elasticity and ease of assembly.

Flexible thermoplastics

These materials (polyurethane, polyester elastomers) are used in sealing elements, wipers and thrust rings with very high elasticity, abrasion resistance and compressive strength.

Rigid thermoplastics

Highly resistant materials (polyamide, polyacetal) are used in manufacture of sliding elements and thrust rings.

Fluorine containing thermoplastics with and without reinforcements

This group mainly comprises of PTFE and related compounds. Seals, wipers and guides manufactured from these materials primarily relate to applications that require low friction and high resistance and stability.

Thermosetting plastics

These composites (phenolic resins and fabrics) are used in peripheral components of sealing systems such as supporting components and slide ways.