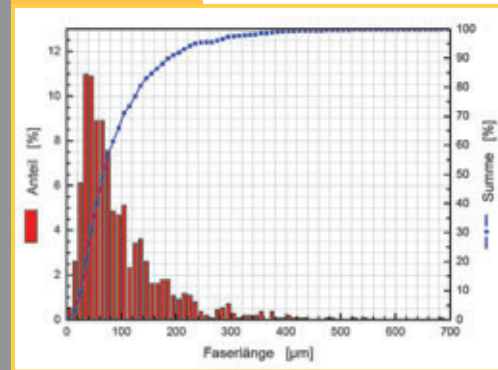


1. TEST PLANNING

For test planning we use sophisticated knowledge from the field of polymer chemistry to determine suitable matrix materials, fillers and lubricants. In order to develop customized materials without delay we always focus on efficient testing arrangements.

2. SELECTION OF RAW MATERIALS

We exclusively select premium quality components with respect to purity as well as particle size distribution. Only raw materials with highly reproducible properties lead to constant material properties.



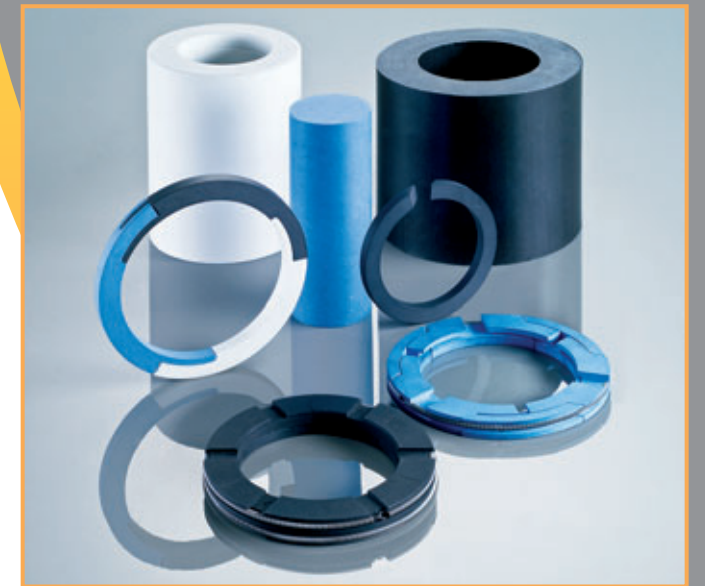
Fiber length distribution of a filler

4. PRODUCTION OF SEMI-FINISHED PRODUCTS

STASSKOL has precise devices and tools for the molding and sintering of semi-finished products. The mixtures are processed using complex pressure and temperature profiles to achieve highly wear resistant materials under gentle conditions.

A digital control of all processing parameters enables a high reproducibility of material properties.

Due to the fact that the necessary machining of test specimen also has a great influence on the measured properties, those specimens for tribological and mechanical investigations are manufactured by STASSKOL.



STASSKOL uses an efficient development cycle for the optimization of materials with high wear resistance and excellent mechanical properties.

This includes the selection of preferred basic components based on latest polymer chemistry know-how, as well as the reproducible production of homogeneous mixtures and their processing into premium quality semi-finished products.

Fast combination of these steps as well as precise characterization of materials enables the development of products with optimized properties for our customers within very short periods of time.

STASSKOL

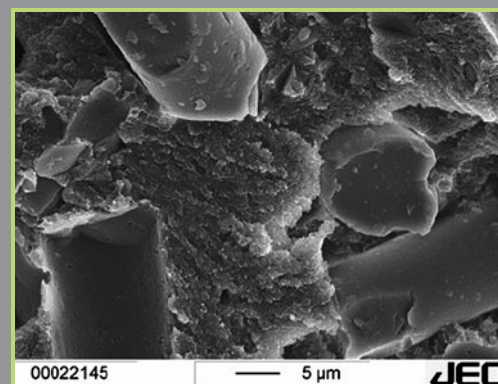
Custom-made Materials

3. POLYMER COMPOUNDS

Homogeneity and distribution of the incorporated components have a significant influence on the properties of polymer compounds.

Therefore, STASSKOL uses optimized mixing devices for high and constant quality of its compounds.

This quality is continuously controlled by microscopic inspections.



Microscopic image of filler distribution and bonding

5. MATERIAL CHARACTERIZATION

The tribological, mechanical and morphological properties of semi-finished products produced by STASSKOL can be determined without delay.

Especially the new oscillating tribometer – whose development was headed by STASSKOL – is one of the most important tools for determining the wear behavior of materials at service conditions.

Details of the various characterization methods can be found in the separate “Test bed” brochure.



Oscillating tribometer



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Material development

- Test planning
- Selection of raw materials
- Mixing of polymer compounds
- Production of semi-finished products
- Material Characterization

STASSKOL
 Kolbenstangendichtungen GmbH Staßfurt

