SK202 is a sealing material based on Polytetrafluoroethylene (PTFE) and it is widely used in dry-running service. A typical application is the compression of gases like Air, Carbon dioxide and Hydrocarbons mostly by reciprocating systems. The optimized content of glass fibers, carbon black and graphite ensures high service life-times, increased mechanical properties and an improved chemical resistance.
**Mechanical Properties**

SK202 shows an increased stiffness due to the high filler content. The mechanical properties have been investigated using a tensile testing machine under standard (DIN EN ISO 527-1) conditions.

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elastic modulus</td>
<td>950 MPa</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>20.2 MPa</td>
</tr>
<tr>
<td>Elongation at break</td>
<td>290 %</td>
</tr>
<tr>
<td>Density</td>
<td>2.20 g/cm³</td>
</tr>
<tr>
<td>Hardness</td>
<td>55.0 Shore D</td>
</tr>
</tbody>
</table>

**Customer Guideline**

**Operating Conditions:**
- Dry-running
- Pressure up to 200 bar
- Temperature up to 150 °C
- Average velocity up to 4.5 m/sec
- Dew point down to -50 °C

**References:**
- Refinery applications
- Polymer productions
- Air compressors
- Flare gases

Please contact STASSKOL to get additional information about SK202. You will be supported by choosing the best sealing material according to the operating conditions of your application.

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**Tribological Properties**

The tribological properties are defining the wear behavior of the material. The wear rate (k) and friction coefficient (µ) of SK202 are identified by tribological characterization.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Wear Rate (k)</th>
<th>Friction Coefficient (µ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under Hydrogen</td>
<td>k = 5 \times 10^{-7} \text{mm}^3/\text{Nm}</td>
<td>µ = 0.09</td>
</tr>
<tr>
<td>Under Nitrogen</td>
<td>k = 1 \times 10^{-7} \text{mm}^3/\text{Nm}</td>
<td>µ = 0.36</td>
</tr>
</tbody>
</table>

The following conditions were applied during the test of SK202:
- Gas: Hydrogen, Nitrogen
- Average velocity: 2.7 m/sec
- Pressure: 20 bar
- Dew point: -80 °C
- Counter surface: steel with tungsten carbide coating
- Lubricant: none

The lower the wear rate the higher are the wear resistance and the expected service life-time at the field application.

STASSKOL provides state-of-the-art equipment for tribological characterizations under reciprocating and rotating movement. An unique reciprocating tribometer was used to investigate the wear behavior of SK202.

The material performance strongly depends on the test conditions. Therefore measurements at the parameters of the customer’s application are recommended. Please use the characterization and development capabilities of STASSKOL.