

STASSKOL



SK 353

Sealing material for wet Air
in dry-running applications

SK353 is a sealing material based on Polytetrafluorethylene (PTFE) and it is widely used at dry-running compressor services. Typical applications are the compression of Air for PET applications, Air supply systems for production areas and bottling of Air. An optimized content of fillers and lubricants within the PTFE matrix ensures high service life-times and increased mechanical properties, while keeping an outstanding chemical resistance.

TRIBOLOGICAL PROPERTIES

The tribological properties are defining the wear behavior of the material. The wear rate (k) and friction coefficient (μ) of SK353 are identified by tribological characterization.

Under Air	
Wear rate:	$k = 2.5 \cdot 10^{-7} \text{ mm}^3/\text{Nm}$
Friction coefficient:	$\mu = 0.13$

The following conditions were applied during the test of SK353:

Gas:	Air
Average velocity:	5.2 m/sec
Pressure:	20 bar
Dew point:	0 °C
Counter surface:	Steel 1.4028 (AISI 420)
Lubricant:	none

The lower the wear rate, the higher is 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. For example, a unique reciprocating tribometer was used to investigate the wear behavior of SK353.



The material performance strongly depends on the test conditions. Therefore, we recommend conducting measurements at the parameters of the customer's application. Please use the characterization and development capabilities of STASSKOL.

MECHANICAL PROPERTIES

SK353 shows a very high stiffness due to the filler concentrations within the PTFE matrix while preserving a very good flexibility of the sealing material. The mechanical properties have been investigated using a tensile testing machine under standard (DIN EN ISO 527-1) conditions.

Elastic modulus:	1,670 MPa
Tensile strength:	26.3 MPa
Elongation at break:	53 %
Density:	2.92 g/cm ³
Hardness:	66.8 Shore D

CUSTOMER GUIDELINE

Operating Conditions:

- Dry-running service
- Pressure up to 100 bar
- Temperature up to 150 °C
- Average velocity up to 4.5 m/sec
- High dew points (wet Air)

References:

- Air compressors
- PET industry
- Supply of compressed Air
- Bottling of Air

Please contact STASSKOL to get additional information about SK353. We are pleased to support you by choosing the best sealing material according to the operating conditions of your application.

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