Dr. Tillwich GmbH Werner Stehr

Product Specifications

Fluorstatic 70

Article No.: TS4500

Fluorinated Fully Synthetic Special Oil

Laboratory Data:

Kinematic Viscosity ν(DIN)

Temperature	ν (mm²/s)
0°C [32°F]	260
20°C [68°F]	70
40°C[104°F]	30
Viscosity Index (ISO)	130

capillary viscometry

Viscosity-Temperature-Behavior	good

Permanent Low Temperature   -45°C
(72 hrs without crystallization)   [-49°F]

Application Temperature   -40°C to +250°C
   [-40°F to +482°F]

Density 20°C [68°F] (DIN)   1.9 g/cm³
Surface Tension   21 mN/m
Color   colorless
Evaporation Rate   -0.5 %
(24 hrs/105°C [221°F])   very good
Wettability   brass: good
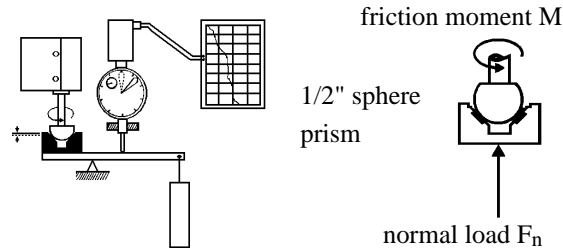   steel: good
Drop Stability   POM: good

Durability   excellent

Compatibility with Plastics   very good
Chemical Name   perfluorinated polyether

Tribological Data:

Test system: sphere on prism (ISO 7148/2)

friction moment M

1/2" sphere
prism

normal load Fₙ

Friction Behavior
dependent on sliding speed

| v (mm/s)	f	friction coefficient f
		0.1 0.2 0.3 0.4
0	0.10	
20	0.02	
50	0.01	
200	0.01	

materials: steel/POM, load 3N, 25°C [77°F]
lubricant: Fluorstatic 70

Wear Behavior
comparison: dry and lubricated with Fluorstatic 70

materials	wear (in mm)
	0.01 0.03 0.1 0.3 1.0
St/POM: Fluor. 70	
dry	
St/st: Fluor. 70	
dry	

test parameters: load 30N, distance 10 km,
   25°C [77°F], v = 28.1 mm/s

Comments:

Silicon free speciality oil with excellent aging behavior. Good compatibility with plastics and elastomers. The oil repells water and is suitable under radiation. It is not flammable and has good di-electric properties.
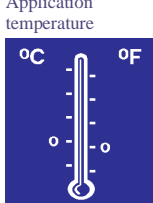
Application:

Precision metal and plastic gears, ball bearings, meteorological and optical instruments, aviation instruments, MIL-technic.
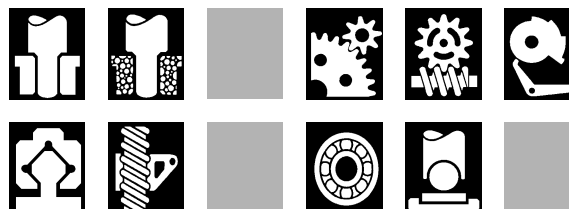
Product
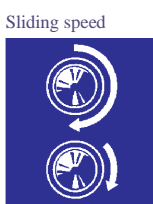
Bearing material

METALL

POLYMER

MINERAL

Application temperature

°C   °F

Bearing load

Sliding speed

Durability

Viscosity

Wetting

P170

TÜV
ISO 9001