Dr. Tillwich GmbH
Werner Stehr

Product Specifications

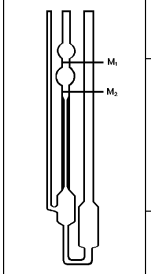
Plastic Oil K2363/100

Article No.: TS2100

Precision Lubricant for Plastics

Laboratory Data:

Kinematic Viscosity (DIN)



capillary viscometry

Temperature	ν (mm²/s)
0°C [32°F]	160
20°C [68°F]	100
40°C[104°F]	70
Viscosity Index (ISO)	420

Viscosity-Temperature-Behavior very good

Permanent Low Temperature -35°C
(72 hrs without crystallization) [-31°F]

Application Temperature -30°C to +120°C
[-22°F to +248°F]

Density 20°C [68°F] (DIN) 0.97 g/cm³

Surface Tension 22 mN/m

Color (ASTM) colorless

Evaporation Rate -0.1 %
(24 hrs/105°C [221°F]) very low

Wetting very good

Durability very good

Compatibility with Plastics

compatible PA11, PA66, PBTP, PC
POM, PPO, SB, TPU

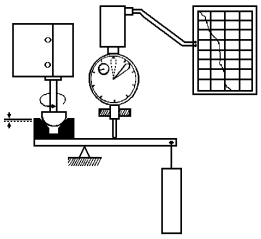
satisfactory ABS, PA12, PA6-3T

incompatible ASA, POM (CL)

Chemical Name Polysiloxanealcohol

Tribological Data:

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



Friction Behavior
dependent on sliding speed

v (mm/s)	f	friction coefficient f (0.1 / 0.2 / 0.3 / 0.4)
0	0.11	
20	0.01	
50	0.01	
200	0.01	

materials: steel/POM, load 3N, 25°C [77°F]
lubricant: Plastic Oil K2363/100

Wear Behavior
comparison: dry and lubricated with Plastic Oil K2363/100

materials		wear (in mm) (0.01 / 0.03 / 0.1 / 0.3 / 1.0)
St/POM:	K2363	
	dry	
POM/PC:	K2363	
	dry	

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

Comments:

Special lubricant for plastic/plastic and plastic/metal bearing combinations. Very good friction and wear reduction. Aging better than silicone oils. Among the highest Viscosity Indices of all known clock and instrument oils, which allows for both, application in wide temperature ranges and excellent noise damping. Good wetting characteristics. Epilamisation with Antispread necessary, when applying large quantitites of oil.

Experiences: For over 10 years in series production. Manufactured quantity over 50.000.000 clock movements. Long-term stability (over 10 years) is well established.

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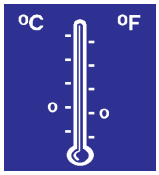
Application:

Plastic bearings in precision machinery; analog quartz movements (step-motor), switch clocks, timers, medical instruments, optics, cameras, cassette decks, controls, video drives.

Product

Bearing material

Application temperature

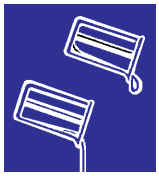


Bearing load

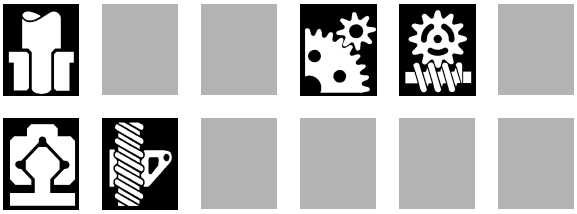
Sliding speed

Durability

Viscosity



Wetting



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