Dr. Tillwich GmbH
Werner Stehr

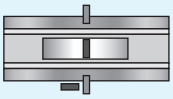
Plastic Oil K 4563/600 red

Article No. TS3104

Precision Oil for Automotive and Aviation Instruments

Product Specifications

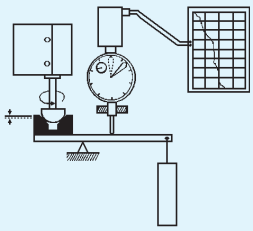
Laboratory Data:

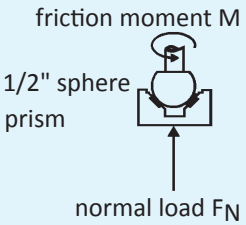
Viscosity		
Stabinger (ASTM D7042)	**Temperature**	**ν (mm²/s)**
	0 °C [32 °F]	950
	20 °C [68 °F]	600
	40 °C [104 °F]	400
Viscosity-Index (ISO)		420
Viscosity-Temperature-Behaviour		excellent

Color	red
Permanent Low Temperature 72 hrs fluid	-50 °C [-58 °F]
Application Temperature	-45 °C to +120 °C [-49 °F to +248 °F]
Density 20 °C [68 °F] (DIN)	0.97 g/cm³
Surface Tension	22 mN/m
Evaporation Rate 24 hrs/105 °C [221 °F]	1.0 % low
Wetting	very good
Durability	very good
Compatibility with Plastics	
compatible	PA11, PA12, PA6-3T, PA66, PBT, PC, POM, PPO, TPU
satisfactory	ABS, SB
incompatible	ASA, POM (CL)
Composition	frigopolysiloxane-alcohol

Tribological Data:

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





Friction Behaviour
dependent on sliding speed

v (mm/s)	f	friction coefficient f (0.1 0.2 0.3 0.4)
0	0.07	
20	0.03	
50	0.03	
200	0.04	
materials:	steel/POM, load 3 N, 25 °C [77 °F]	
lubricant:	Plastic Oil K 4563/600 red	

Wear Behaviour
comparison: dry and lubricated with Plastic Oil K 4563/600 red

materials	wear (in mm) (0.01 0.03 0.1 0.3 1.0)
St/POM: TS3104 dry	
St/PBT: TS3104 dry	
test parameters:	load 30 N, distance 10 km, 25 °C [77 °F], v=28.1 mm/s

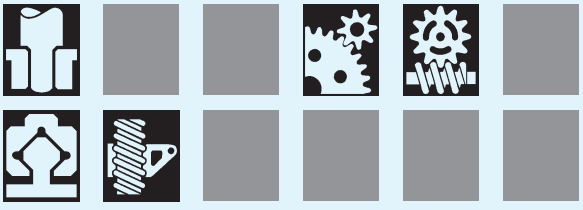
Comments:

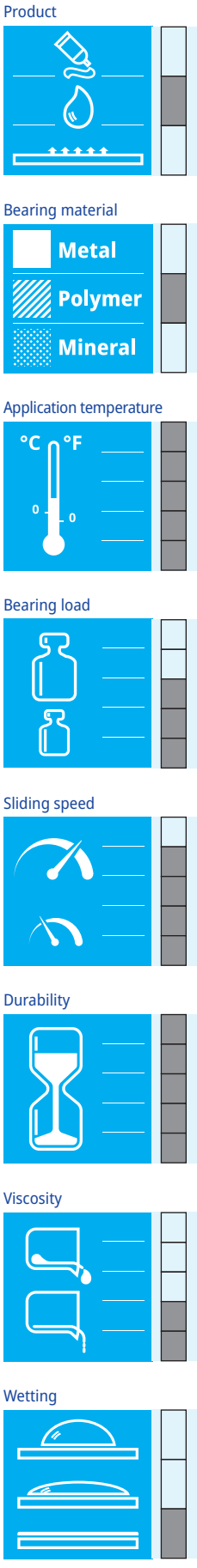
Plastic Oil K 4563 has been developed particulary for applications in the automotive and aviation field. It fulfills the requirement to withstand 48 hours low temperature storage at -40 °C [-40 °F]. The oil exhibits strong noise damping characteristics between -40 °C and 120 °C [-40 °F and +248 °F], due to its excellent viscosity-temperature-behaviour. Compatible with nearly all plastics. Unaffected by humidity. Applicable under high pressure loads. Good wetting characteristics. Epilamisation with Antispread necessary, when applying large quantities of oil.

Experiences: Basic oil in over 70,000,000 automotive instruments. Long-term stability (over 10 years) is well established.

Application:

Plastic bearings in automotive and aviation instruments, instruments under difficult environmental conditions, meters and controls in cold-storage rooms, meteorological instruments, offshore applications.
Speedometers, tachometers, automotive clocks, timers, meters, clocks.





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