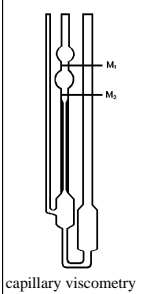


# Product Specifications

## Laboratory Data:

Kinematic Viscosity (DIN)		
 capillary viscometry	Temperature	$\nu$ (mm <sup>2</sup> /s)
	0°C [32°F]	950
	20°C [68°F]	600
	40°C [104°F]	400
	Viscosity Index (ISO)	420
Viscosity-Temperature-Behavior		very good

**Permanent Low Temperature** -50°C  
(72 hrs without crystallization) [-58°F]  
**Application Temperature** -45°C to +120°C  
[-49°F to +248°F]

**Density** 20°C [68°F] 0.97 g/cm<sup>3</sup>  
**Surface Tension** 22 mN/m  
**Color** red  
**Evaporation Rate** -1.0 %  
(24 hrs/105°C [221°F]) low  
**Wetting** very good  
**Durability** very good

**Compatibility with Plastics**  
**compatible** PA11, PA12, PA6-3T, PA66, PBTP, PC, POM, PPO, TPU  
**satisfactory** ABS, SB  
**incompatible** ASA, POM (CL)  
**Chemical Name** Frigopolysiloxane-alcohol

## Comments:

Plastic Oil K4563 has been developed particularly 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-behavior. Compatible with nearly all plastics. Unaffected by humidity. Applicable under high pressure loads. Good wetting characteristics. Epilamination 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.

P053a

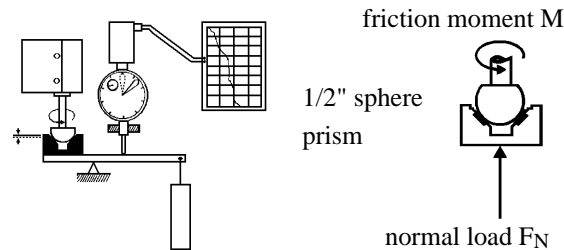
# Plastic Oil K4563/600

Article No.: TS3104

Precision Oil for Automotive and Aviation Instruments

## Tribological Data:

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

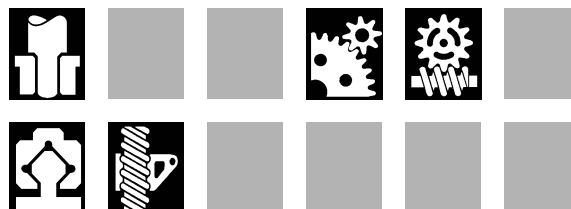


Friction Behavior					
dependent on sliding speed					
$\nu$ (mm/s)	$f$	friction coefficient $f$			
		0.1	0.2	0.3	0.4
0	0.07	█			
20	0.03	█			
50	0.03	█			
200	0.04	█			
materials:		steel/POM, load 3N, 25°C [77°F]			
lubricant:		Plastic Oil K4563/600			

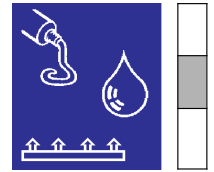
Wear Behavior						
comparison: dry and lubricated with Plastic Oil K4563/600						
materials		wear (in mm)				
		0.01	0.03	0.1	0.3	1.0
St/POM: K4563	dry	█				
	dry			█		
St/PBTP: K4563	dry	█				
	dry			█		
test parameters:		load 30N, distance 10 km, 25°C [77°F], $\nu = 28.1$ mm/s				

## Application:

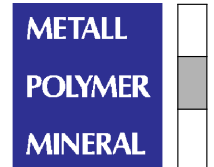
Plastic bearings in automotive and aviation instruments, instruments under difficult environmental conditions, meters and controls in cold-storage rooms, meteorological instruments, offshore applications. Speedometers, tachometers, automotive clocks, timers, meters, clocks.



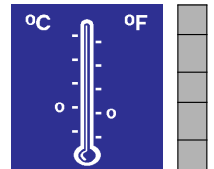
Product



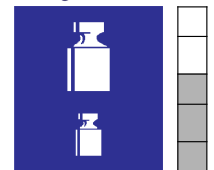
Bearing material



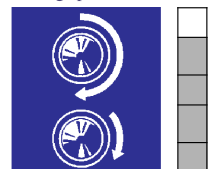
Application temperature



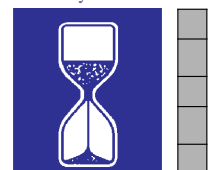
Bearing load



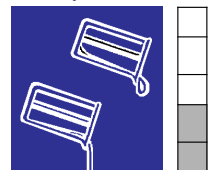
Sliding speed



Durability



Viscosity



Wetting

