Dr. Tillwich GmbH
Werner Stehr

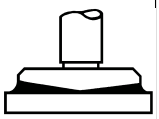
Product Specifications

Plastic Grease K4563/600 25% PTFE

Art. No. TF2920

Precision Grease for Automotive and Aviation Industry

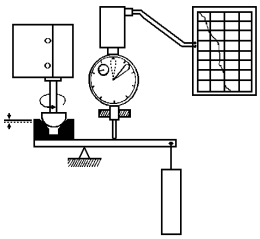
Laboratory Data:

Dynamic Viscosity (DIN)		
Cone C60 1° D = 1000/s	**Temperature**	**η (mPa·s)**
 system: Cone-on-plate	25°C [77°F]	1070 - 1310
	Viscosity-Index (ISO)	420 (base oil)
Flow Behavior		intrinsically viscous
Viscosity-Temperature-Behavior		very good

Consistency	very soft
Color	light red
Oil Separation FTMS (48 hours/85°C)	-10 %
Permanent Low Temperature Base Oil (72 hrs. fluid)	-50°C [-58°F]
Application Temperature	-45°C to +120°C [-49°F to 248°F]
Base Oil	frigopolysiloxane alcohol
Viscosity Base Oil 20°C [68°F]	600 mm²/s
Thickener	micro Teflon powder, no metallic soaps
Durability	very good
Compatibility with Plastics	
compatible	PA11, PA12, PA6-3T, PA66, PBTP, PC, POM, PPO, TPU
satisfactory	ABS, SB
incompatible	ASA, POM (CL)

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	0.02	
20	0.02	
50	0.01	
200	0.06	
materials:	steel/polyacetale, load 3N, 25°C [77°F]	
lubricant:	Plastic Grease K4563/600 25% PTFE	

Wear Behavior
comparison: dry and lubricated with K4563/600 25% PTFE

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

Comments:

Plastic Grease K4563/600 25% PTFE 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]. Excellent viscosity-temperature-behavior ensures very good noise damping qualities from -40°C to +120°C. Suited for most plastics. Unaffected by humidity. Applicable under high pressure loads. Emergency running properties due to micro PTFE powder. Good wetting characteristics. Epilamisation with Antispread necessary, when using point lubrication.

Experiences: Basic oil in over 70.000.000 automotive instruments. Long-term stability (over 10 years) is well established.

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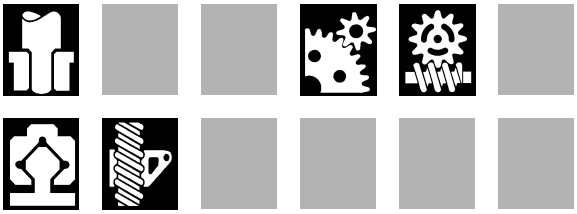
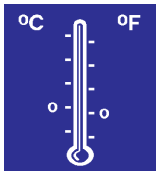
Application:

Precision gears and sliding bearings out of plastic materials in automotive and aviation instruments under difficult environmental conditions. Step motors, tachometers, tachographs, speedometers, timers, supply meters, automotive clocks,.



Product


Bearing material


Application temperature


Bearing load


Sliding speed


Durability


Viscosity


Wetting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