Dr. Tillwich GmbH
Werner Stehr

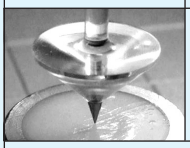
Precision Grease R 27

Article No. TF1210

Clock and Instrument Grease

Product Specifications

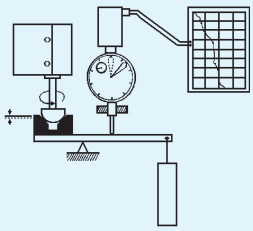
Laboratory Data:

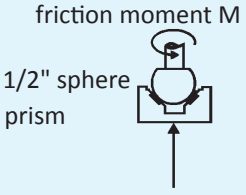
Penetration		
quarter cone	**Unworked penetration**	**Worked penetration**
	250 - 310 mm/10	250 - 310 mm/10
NLGI Class		2
Consistency		medium

Color	beige
Dropping Point	180 °C [356 °F]
Oil Separation (FTMS) 48 hrs/85 °C [185 °F]	5 %
Permanent Low Temperature Base Oil 72 hrs fluid	-15 °C [+5 °F]
Application Temperature	-10 °C to +60°C [+14 °F to +140 °F]
Base Oil	mineral oils, PAOs, esters, stabilized
Viscosity Base Oil 20 °C [68 °F]	140 mm²/s
Thickener	metallic soap
Durability	good
Corrosion Resistance	brass: satisfactory steel: very good

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	0.07	
50	0.05	
200	0.05	
materials:	steel/brass, load 3 N, 25 °C [77 °F]	
lubricant:	Precision Grease R 27	

Wear Behaviour
comparison: dry and lubricated with Precision Grease R 27

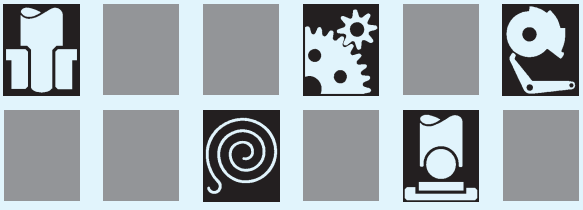
materials	wear (in mm) (0.01 0.03 0.1 0.3 1.0)
St/brass: TF1210	
dry	
St/steel: TF1210	
dry	
test parameters:	load 30 N, distance 10 km, 25 °C [77 °F], v=28.1 mm/s

Comments:

Metallic soap thickened grease based on mineral and ester oils with polyalpha-olefines. An ageing stabilization according to the most modern chemical procedures guarantees specifications required in the field of horological and instruments technology.

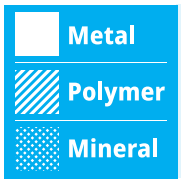
Application:

For metal/metal precision bearings (steel, non-ferrous metals, aluminum, etc.); e.g. sliding bearings in measuring instruments, clock movements, recording devices, synchronous motors and instruments.
For windings, barrel arbors, anchor pivots, teeth of balance wheels, mainsprings and rotor bearings.

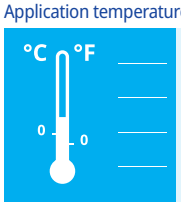


Product

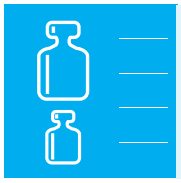
Bearing material



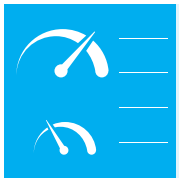
Application temperature



Bearing load

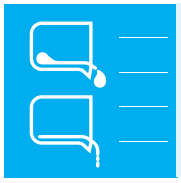


Sliding speed



Durability

Viscosity



Wetting

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