


## Product Specifications

### Laboratory Data:

Penetration		
quarter cone	Unworked penetration	Worked penetration
	235 - 285 mm/10	250 - 310 mm/10
NLGI Class		3
Consistency		firm

<b>Color</b>	yellow/white
<b>Dropping Point</b>	180 °C [356 °F]
<b>Oil Separation (FTMS)</b> 48 hrs/85 °C [185 °F]	5 %
<b>Permanent Low Temperature Base Oil</b> 72 hrs fluid	-20 °C [-4 °F]
<b>Application Temperature</b>	-10 °C to +80 °C [+14 °F to +176 °F]
<b>Base Oil</b>	synthetic oil on ester base (free of silicones)
<b>Viscosity Base Oil</b> 20 °C [68 °F]	150 mm <sup>2</sup> /s
<b>Thickener</b>	metallic soaps, anti-separation-gel, micro PTFE particles
<b>Durability</b>	very good
<b>Drop Stability</b>	very good
<b>Corrosion Resistance</b>	brass: very good steel: very good
<b>Compatibility with Plastics</b>	on request

### Comments:

Clock-Grease 859-8 + PTFE has been developed especially for precision bearings out of metals. It contains a fully synthetic base oil with high load carrying capacity and excellent ageing stability. A special thickener combination out of metallic soaps, anti-separation-gel and micro PTFE particles guarantees high adhesion, an optimized oil separation behavior and a strong reduction of stick-slip effects. Very low friction coefficients.

Clock-Grease 859-8 + PTFE is free of silicones. If applied with plastics please test their compatibility or request results.

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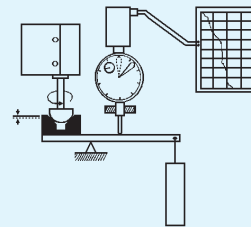
# Clock-Grease 859-8 + PTFE

Article No. TF1850

Precision Grease with Excellent Friction Behavior

### Tribological Data:

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



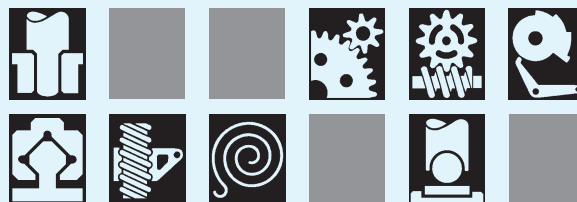
friction moment M  
1/2" sphere  
prism  
normal load  $F_N$

Friction Behaviour					
dependent on sliding speed					
v (mm/s)	f	friction coefficient f			
		0.1	0.2	0.3	0.4
0	0.08	■			
20	0.06	■			
50	0.04	■			
200	0.04	■			
materials:		steel/brass, load 3 N, 25 °C [77 °F]			
lubricant:		Clock-Grease 859-8 + PTFE			

Wear Behaviour					
comparison: dry and lubricated with Clock-Grease 859-8 + PTFE					
materials	wear (in mm)				
	0.01	0.03	0.1	0.3	1.0
St/brass: TF1850 dry	■	■	■	■	■
St/steel: TF1850 dry	■	■	■	■	■
test parameters:		load 30 N, distance 10 km, 25 °C [77 °F], v=28.1 mm/s			

### Application:

For metal bearings in clock movements, counters, alarm clocks, helical gear trains, measuring devices, precision gears, mainsprings, plotters, printers. For all brass/steel bearings from 0.1 to 10 mm diameter (0.004 to 3/8 inches). For barrels, clicks, guidances, etc.



#### Product



#### Bearing material



#### Application temperature



#### Bearing load



#### Sliding speed



#### Durability



#### Viscosity



#### Wetting

