

Product Specifications

Laboratory Data:

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

| | |
|--|---|
| Color | yellow/white |
| Dropping Point | 180 °C [356 °F] |
| Oil Separation (FTMS) 48 hrs/85 °C [185 °F] | 5 % |
| Permanent Low Temperature Base Oil 72 hrs fluid | -20 °C [-4 °F] |
| Application Temperature | -10 °C to +80 °C [+14 °F to +176 °F] |
| Base Oil | synthetic oil on ester base (free of silicones) |
| Viscosity Base Oil 20 °C [68 °F] | 150 mm ² /s |
| Thickener | metallic soaps, anti-separation-gel, micro PTFE particles |
| Durability | very good |
| Drop Stability | very good |
| Corrosion Resistance | brass: very good steel: very good |
| Compatibility with Plastics | 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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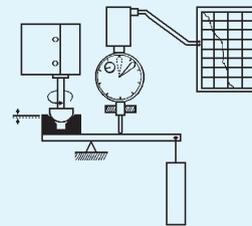
Clock-Grease 859-8 + PTFE

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:

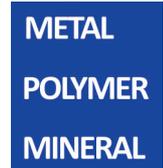
For metal bearings in clock movements, counters, alarm clocks, helical gear trains, measuring devices, precision gears, mainsprings, plotters, printers. For all brass/steel bearings from 0.1 to 10 mm diameter (0.004 to 3/8 inches). For barrels, clicks, guidances, etc.



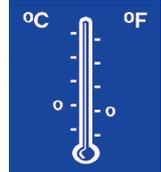
Product



Bearing material



Application temperature



Bearing load



Sliding speed



Durability



Viscosity



Wetting

