Dr. Tillwich GmbH
Werner Stehr

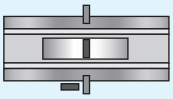
Product Specifications

Clock 859

Article No. TS5100

Synthetic Clock Oil

Laboratory Data:

Viscosity		
Stabinger (ASTM D7042)	**Temperature**	**ν (mm²/s)**
	0 °C [32 °F]	550
	20 °C [68 °F]	150
	40 °C [104 °F]	60
Viscosity-Index (ISO)		150
Viscosity-Temperature-Behaviour		good

Color	yellow
Permanent Low Temperature 72 hrs fluid	-20 °C [-4 °F]
Application Temperature	-15 °C to +100 °C [+5 °F to +212 °F]
Density 20 °C [68 °F] (DIN)	0.98 g/cm³
Surface Tension	32 mN/m
Evaporation Rate 24 hrs/105 °C [221 °F]	0.1 % very low
Drop Stability	good
Durability	very good
Corrosion Resistance	brass: very good steel: very good
Compatibility with Plastics	
compatible	PA66, PBT, POM
satisfactory	POM (CL)
incompatible	ABS, ASA, PC, PPO, SB
Composition	arylpolyalcanoate

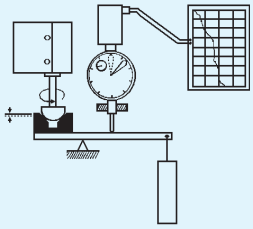
Comments:

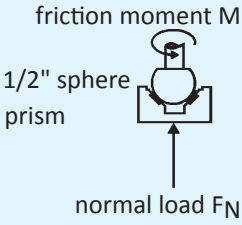
Clock 859 is a synthetic clock oil. Its stability against ageing is superb, even under most adverse conditions. It is compatible with steel, brass and plastic materials. Special stabilizers protect the oil from negative influences of pinion or free cutting steel. Friction values in steel/steel and brass/steel bearings are outstandingly low. Wear is reduced to a minimum.

P094c

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	0.16	
20	0.05	
50	0.02	
200	0.02	

materials: steel/brass, load 3 N, 25 °C [77 °F]
lubricant: Clock 859

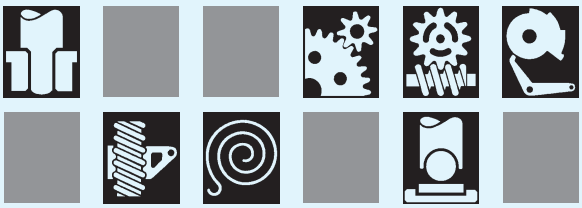
Wear Behaviour
comparison: dry and lubricated with Clock 859

materials	wear (in mm) (0.01 – 0.03 – 0.1 – 0.3 – 1.0)
St/brass: TS5100	
dry	
St/steel: TS5100	
dry	

test parameters: load 30 N, distance 10 km, 25 °C [77 °F], v=28.1 mm/s

Application:

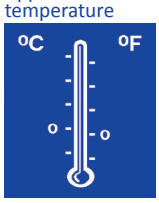
For clock movements, counters, printers, alarm clocks, helical gear trains, measuring devices, precision gears, plotters, brass/steel bearings from 0.1 to 10 mm diameter (0.004 to 3/8 inches).



Product

Bearing material

Application temperature



Bearing load

Sliding speed

Durability

Viscosity

Wetting

Dr. Tillwich GmbH Werner Stehr
Murber Steige 26
D-72160 Horb (Ahldorf)

Phone: +49 (0) 7451 5386-0
Telefax: +49 (0) 7451 5386-70
info@tillwich-stehr.com

Certified acc. to ISO 9001