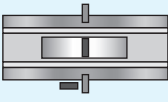


## Product Specifications

### Laboratory Data:

Viscosity		
Stabinger (ASTM D7042)	Temperature	$\nu$ (mm <sup>2</sup> /s)
	0 °C [32 °F]	600
	20 °C [68 °F]	140
	40 °C [104 °F]	50
Viscosity-Index (ISO)		110
Viscosity-Temperature-Behaviour		good

<b>Color</b>	yellow
<b>Permanent Low Temperature</b> 72 hrs fluid	-15 °C [+5 °F]
<b>Application Temperature</b>	-10 °C to +80 °C [+14 °F to +176 °F]
<b>Density</b> 20 °C [68 °F] (DIN)	0.91 g/cm <sup>3</sup>
<b>Surface Tension</b>	31 mN/m
<b>Evaporation Rate</b> 24 hrs/105 °C [221 °F]	0.4 % very low
<b>Drop Stability</b>	good
<b>Durability</b>	good
<b>Corrosion Resistance</b>	brass: very good steel: very good
<b>Compatibility with Plastics</b>	on request
<b>Composition</b>	partially synthetic oil on base of esters and hydrocarbons with additives

### Comments:

Partially synthetic clock and instrument oil on base of different synthetic ester oils, natural hydrocarbons and polyalphaolefines. Type 3-5 is equipped with an additive package for high ageing and oxidation stability as well as corrosion resistance, which ensures its application in the field of horology.

The partially synthetic clock and instrument oil Type 3-5 replaces the ancient classical watch and instrument oils Type 3, 4 and 5.

P119c

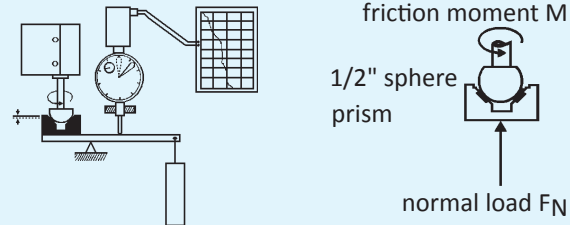
# Type 3-5

Article No. TK2235

## Partially Synthetic Clock and Instrument Oil

### Tribological Data:

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



Friction Behaviour					
dependent on sliding speed					
$\nu$ (mm/s)	f	friction coefficient f			
		0.1	0.2	0.3	0.4
0	0.17	[Bar chart showing high friction]			
20	0.05	[Bar chart showing medium friction]			
50	0.03	[Bar chart showing low friction]			
200	0.03	[Bar chart showing low friction]			
materials:		steel/brass, load 3 N, 25 °C [77 °F]			
lubricant:		Type 3-5			

Wear Behaviour					
comparison: dry and lubricated with Type 3-5					
materials	wear (in mm)				
	0.01	0.03	0.1	0.3	1.0
St/brass: TK2235 dry	[Bar chart showing high wear]				
St/steel: TK2235 dry	[Bar chart showing high wear]				
test parameters:	load 30 N, distance 10 km, 25 °C [77 °F], $\nu=28.1$ mm/s				

### Application:

Watch and instrument oil for metallic sliding combinations in precision instruments. For springs and pivot bearings from 1 to 5 mm diameter (0.04 to 0.20 inches) in alarm clocks, wall-clocks, domestic clocks or switch-clocks.

