Dr. Tillwich GmbH Werner Stehr

Product Specifications

Plastic Oil K2363/1000

Article No.: TS2402

Precision Lubricant for Plastics

Product Laboratory Data: **Tribological Data:** Test system: sphere on prism (ISO 7148/2) Kinematic Viscosity (DIN) friction moment M $v (mm^2/s)$ Temperature 1/2" sphere 0°C [32°F] 1600 prism Bearing material 20°C [68°F] 1000 METALL 40°C[104°F] 690 POLYMER normal load FN Viscosity 420 MINERAL Index (ISO) capillary viscometr **Friction Behavior** Application dependent on sliding speed Viscosity-Temperature-Behavior very good temperature friction coefficient f \mathbf{v} (mm/s) f °C 0.4 0.2 0.3 -30°C 0.1 **Permanent Low Temperature** (72 hrs without crystallization) [-22°F] 0 0.03 **Application Temperature** -25°C to +120°C 20 0.01 h $[-13^{\circ}F \text{ to } +248^{\circ}F]$ 50 0.01 200 0.06 0.97 g/cm^3 Density 20°C [68°F] (DIN) steel/POM, load 3N, 25°C [77°F] Bearing load materials: **Surface Tension** 22 mN/m lubricant: Plastic Oil K2363/1000 Color (ASTM) blue **Evaporation Rate** -0.4 % Wear Behavior (16 hrs/105°C [221°F]) very low comparison: dry and lubricated with Plastic Oil K2363/1000 Wetting very good wear (in mm) materials Durability very good 0.01 0.03 0.1 0.3 1.0 St/POM: K2363 Sliding speed **Compatibility with Plastics** drv compatible PA11, PA66, PBTP, PC **POM/PC: K2363** POM, PPO, SB, TPU dry ABS, PA12, PA6-3T satisfactory load 30N, distance 10 km, test parameters: incompatible ASA, POM (CL) $25^{\circ}C$ [77°F], v = 28.1 mm/s **Chemical Name** Polysiloxanealcohol Durability

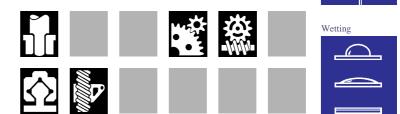
Comments:

Special lubricant for plastic/plastic and plastic/metal bearing combinations. Very good friction and wear reduction. Aging better than silicone oils. Among the highest Viscosity Indices of all known clock and instrument oils, which allows for both, application in wide temperature ranges and excellent noise damping. Good wetting characteristics. Epilamisation with Antispread necessary, when applying large quantitites of oil.

Experiences: For over 10 years in series production. Manufactured quantity over 50.000.000 clock movements. Long-term stability (over 10 years) is well established.

Application:

Plastic bearings in precision machinery; analog quartz movements (step-motor), switch clocks, timers, medical instruments, optics, cameras, cassette decks, controls, video drives.



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Viscosity