

SYNTHETIC AVIATION TURBINE OIL

NATO CODE O-154 - MIL-PRF-23699 G Class HTS - SAE AS5780 Class HPC

DESCRIPTION

Turbonycoil 640 is a lubricating oil with a viscosity of 5 cSt at 100°C. It is based on neopentyl polyol esters with high thermal stability, fortified with carefully selected anti-oxidant, anti-wear and anti-corrosion additives.

APPLICATIONS

TURBONYCOIL 640 has been designed for use in gas turbine engines in commercial and military aircrafts and helicopters as well as in aero-derivative gas turbines. It is tailor-made to address the following requirements regarding low coking propensity, high resistance to oxidation and thermal degradation, high electrical conductivity. Therefore **TURBONYCOIL 640** is recommended for use in hot running engine designs where evidence of oil coking and/or oil degradation was noted.

- Turbine oil of commercial and military aircrafts and helicopters, recommended in hot engines
- Accessories (APU, IDG, starter)
- Main and tail helicopter gearbox
- Aero-derivative gas turbines : recommended for Rolls-Royce 501K-B7, 501K-B7S and 501K-B7C.



| CHARACTERISTIC | UNIT | TYPICAL RESULT | SAE AS 5780 HPC LIMIT | TEST METHOD |
|---|-------------------------------------|----------------------|--|------------------|
| Kinematic viscosity at 100°C at 40°C at - 40°C | mm ² /s | 4.98 24.6 9000 | 4.90 - 5.40 min. 23.0 max. 13000 | ASTM D445 |
| Density @ 20°C | kg/dm ³ | 0.994 | - | ASTM D4052 |
| Viscosity stability, 72 hrs at -40°C, % change | % | 0.6 | max. +/- 6 | FED-STD-791-3458 |
| Evaporation loss, 6 h 30 at 204°C | %w | 3.1 | max. 10.0 | ASTM D972 |
| Flash point, COC | °C | 264 | min. 246 | ASTM D92 |
| Pour point | °C | - 60 | max. - 54 | ASTM D97 |
| Acid number | mg KOH/g | 0.22 | max. 1.00 | SAE-ARP-5088 |
| Shear stability, viscosity loss | % | - 0.1 | max. 4 | ASTM D 2603 |
| AMS 3217/4 Rubber Swell, 72 hrs at 204°C | % | 18.2 | 5 - 25 | FED-STD-791-3604 |
| Foaming test (tendency/stability) at 24°C at 94°C at 24°C after 94°C | cm ² /min | 5/0 5/0 5/0 | max. 25/0 max. 25/0 max. 25/0 | ASTM D892 |
| Thermal stability and corrosivity, 96 h at 274°C Viscosity change at 40°C Acid number change Steel weight change | % mg KOH/g mg/cm ² | 0.04 0.4 0.02 | max. +/- 5.0 max. 6.00 max. +/- 4.00 | FED-STD-791-3411 |
| HLPS Dynamic coking at 375°C Deposit after 20 h Deposit after 40 h | mg | 0.15 0.24 | max. 0.4 max. 0.6 | SAE-ARP-5996 |
| Electrical conductivity, at 20°C | pS/m | 1500 | - | ASTM D2624 |

The values above are typical values. They do not constitute any contractual commitment.

Sales specifications are available on request. The present technical data sheet replaces all the previous editions