NYCO
AERONAUTICS & DEFENCE

HYDRAUNYCOIL FH 3

TECHNICAL DATA SHEET

ANTI-RUST SYNTHETIC HYDRAULIC FLUID

NATO CODE H-544 - MIL-PRF-46170 E TYPE 1 - TL 9150-0097 AUSG. 3

DESCRIPTION

Hydraunycoil FH 3 is a synthetic hydraulic fluid based on a blend of poly-alpha-olefins (PAO) and synthetic esters, with a viscosity of 15 cSt at 40°C, and a viscosity index of 125. It combines most of the features of Hydraunycoil FH 2 (MIL-PRF-83282/H-537) with strong anti-rust properties and protection from galvanic corrosion.
The undyed, pale yellow, Hydraunycoil FH 3, NATO code H-544, is micro-filtered.

APPLICATIONS

Hydraunycoil FH 3 is primarily used in tank recoil mechanism and hydraulic systems of ground equipment. It enables safer handling and operation at high temperature compared to the previous generation of petroleum-based fluids that exhibit low flash and fire points.

CHARACTERISTIC	UNIT	TYPICAL RESULT	MIL-PRF- 46170 E LIMIT	TEST METHOD
Appearance	-	yellowish	clear liquid	Visual
Density at 20°C	Kg/dm^3	0.853	report	ASTM D4052
Kinematic viscosity at **100°C** **40°C** **- 40°C**	mm^2/s	3.7 15.5 2400	min. 3.4 max. 19.5 max. 2600	ASTM D445
Flash point	°C	220	min. 218	ASTM D92
Fire point	°C	248	min. 246	ASTM D92
Pour point	°C	- 69	max. - 54	ASTM D97
Total acid number	mg KOH/g	0.06	max. 0.20	ASTM D664
Evaporation loss, 22 h at 149°C	%w	3.0	max. 5.0	ASTM D972
Foaming characteristics (tendency/stability) **at 24°C** **at 94°C** **at 24°C after 94°C**	cm^3/cm^3	20/0 30/0 20/0	max. 65 / max. 0 max. 65 / max. 0 max. 65 / max. 0	ASTM D892
Steel on steel wear, 4-ball machine, scar diam. **After 1 h at 147 N** **After 1 h 392 N**	mm	 0.25 0.45	 max. 0.30 max. 0.65	ASTM D4172
Solid particle content **5 - 25 µm** **26 - 50 µm** **51 - 100 µm** **> 100 µm**	nb/100 cm^3	2500 45 15 1	max. 10000 max. 250 max. 50 max. 10	HIAC automatic counter FED-S-791-3012
Water content	mg/kg	200	max. 500	ASTM D6304
Auto-ignition temperature	°C	380	min. 343	ASTM E659
Galvanic corrosion	-	pass	no corrosion	FTM-S-791-5322
Rust prevention test - 100 h at 49°C **Polished specimens** **Sandblasted specimens**		 pass 240h pass 240h	 no corrosion no corrosion	ASTM D1748
Elastomer NBR-L compatibility, 168 h at 70°C	%v	17.0	15.0 - 25.0	ASTM D4289

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.