

## ANTI-RUST SYNTHETIC HYDRAULIC FLUID

H-544 – MIL-PRF-46170 D Type 1 – TL 9150-0097 Ausg. 2

### Description

Hydrauncoil 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 Hydrauncoil FH 2 (MIL-PRF-83282/H-537) with strong anti-rust properties and protection from galvanic corrosion.

The undyed - pale yellow - Hydrauncoil FH 3 is covered by NATO code H-544. It is micro-filtered.

### Application

Hydrauncoil 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	Result	Limit*	Test method
- Appearance	-	conform	clear liquid	-
- Specific gravity at 15.6°C	kg/dm <sup>3</sup>	0.856	0.848 - 0.864	ASTM D 4052
- Kinematic viscosity at 100°C 40°C - 40°C - 54°C	mm <sup>2</sup> /s	3.62 15.2 2350 15423	min. 3.40 max. 19.5 max. 2600 report	ASTM D 445
- Low temperature stability 72 h at - 40°C	-	pass	MIL-PRF-46170	FTM-S-791-3458
- Flash point	°C	222	min. 218	ASTM D 92
- Fire point	°C	258	min. 246	ASTM D 92
- Pour point	°C	- 63	max. - 54	ASTM D 97
- Acid number	mg KOH/g	0.08	max. 0.20	ASTM D 974
- Evaporation loss - Mass fraction 22 h at 149°C	%	3.4	max. 5.0	ASTM D 972
- Foaming characteristics - Foam volume (after) at 24°C 5 minutes aeration 1 minute settling at 94°C 5 minutes aeration 1 minute settling at 24°C after 94°C 5 minutes aeration 1 minute settling	ml	15 0 20 0 15 0	max. 65 max. 0 max. 65 max. 0 max. 65 max. 0	ASTM D 892
- Lubricity - Scar diameter 1 h - 147 N 1 h - 392 N	mm	0.29 0.54	max. 0.30 max. 0.65	ASTM D 4172
- Solid particle content 5 - 25 micrometers 26 - 50 micrometers 51 - 100 micrometers > 100 micrometers	nb/100 cm <sup>3</sup>	pass pass pass pass	max. 10000 max. 250 max. 50 max. 10	HIAC
- Gravimetric method	mg/100 ml	-	max. 0.5	Fed. Std. 791 n° 3009
- Water content	mg/kg	280	Max. 500	MO-10-001 A
- Water sensitivity - Transmittance	%	99	min. 90	MIL-PRF-46170
- Auto-ignition temperature	°C	380	min. 343	ASTM E 659
- Galvanic corrosion	-	pass	no corrosion	FTM-S-791-5322
- Trace of sediment	cm <sup>3</sup>	< 0.001	max. 0.005	ASTM D 2273
- Rust prevention test - 100 h at 49°C Polished specimens Sandblasted specimens		pass pass	no corrosion no corrosion	ASTM D 1748
- Swelling of synthetic rubber NBR L 168 h at 70°C Volume charge	%	18.4	15.0 - 25.0	FTM-S-791-3603

\* MIL-PRF- 46170 D specification

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.