



**ANTI-CORROSION & ANTI-WEAR PETROLEUM HYDRAULIC FLUID**  
**NATO CODE H-540**

**DESCRIPTION**

Hydraunycoil FH 14 is a petroleum-based hydraulic fluid with a viscosity of 40 cSt at 40°C and a viscosity index exceeding 280. It exhibits good anti-rust as well as anti-wear properties.

Hydraunycoil FH 14 is micro-filtered and is supplied with a controlled particulate contamination. It can be used over an extremely wide temperature range, from - 40°C to + 135°C in air-tight circuits.



**APPLICATIONS**

Hydraunycoil FH 14 is intended primarily for use as an operational preservative fluid for ordnance equipment such as recoil systems and hydraulic systems for rotating weapon or aiming devices.

It has been particularly designed for the Krauss-Maffei Leopard tank and as hydraulic fluid for bridge ledger where it offers the right balance of viscosity, low temperature viscosity, anti-wear and corrosion protection.

**SPECIFICATION \* / OEM'S & AIRFRAMERS REFERENCE**

- Approved TL 9150-0035 ISSUE 7
- Approved VJS PHM 6-5-P

\* **Approved:** The product has been approved by the relevant authority. The product is referenced on the applicable qualified product list.

CHARACTERISTIC	UNIT	TYPICAL RESULT	TL 9150-0035 ISS.7 LIMIT	TEST METHOD
Appearance	-	conform	clear limpid	visual examination
Color	-	0.8	max. 5.0	ASTM D 1500
Density at 15°C	-	0.86	report	ASTM D 4052
Kinematic Viscosity at 100°C 40°C - 40°C	mm <sup>2</sup> /s	11.6 40.7 4420	min. 9.8 36 - 45 report	ASTM D 445
Viscosity Index	-	294	min. 250	ASTM D 2270
Stability 72 h at -40°C	-	pass	TL 9150-0035	FTMS-S-791-3459
Flash Point, COC	°C	162	min. 130	ASTM D 92
Pour Point	°C	- 46	max. - 45	ASTM D 97
Total Acid Number	mg KOH/g	2.95	2.5 - 3.5	ASTM D 974
Copper Corrosion, 3 h at 100°C	rating	1a	max. 1	ASTM D 130

CHARACTERISTIC	UNIT	TYPICAL RESULT	TL 9150-0035 ISS.7 LIMIT	TEST METHOD
Trace Metal Content Zinc Calcium Phosphorus Sulphur	mg/kg	1340 475 1500 3540	report report report report	Induction Coupled Plasma Spectroscopy
Water Content	mg/kg	300	max. 500	ASTM D 1533
Solid Particles Contamination	Iso code	15/15/11	max. 20/18/15	HIAC counter ISO 4406 / ISO 11171
FZG test – Failure Load Stage	stage	10	min. 10	DIN ISO 14635-1
Steel on steel wear scar, 4-ball machine, after 1h at 40 daN, 75°C	mm	0.50	max. 0.60	ASTM D 4172
Air Release at +50°C	min	5	max. 8	DIN 51381
Foaming Test (tendency 5min aeration / stability 1 min settling) at 24°C at 94°C at 24°C after 94°C	ml/ml	10/0 45/0 10/0	max. 150 / 0 max. 150 / 0 max. 150 / 0	ASTM D 892
Rubber Compatibility – SRE-NBR1 – 168 h at 100°C - Swelling - Hardness Change - Elongation Change - Tensile Strength Change	%vol Shore A % %	+10 -1 -29 +8	+7 to +19 max. - 7 max. - 35 max. -20	DIN 53521 DIN 53505 DIN 53504 DIN 53504
Shear Stability – 250 cycles viscosity change at 40°C	%	-1.7	max. 3.0	DIN 51382

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.