



LOW TEMPERATURE SYNTHETIC HYDRAULIC FLUID

NATO CODE H-538

DESCRIPTION

Hydraunycoil FH 42 is a synthetic hydraulic fluid based on PAO and esters with a viscosity of 7 cSt at 40°C. It is designed to operate in the temperature range - 54°C to + 200°C without air intake for a long period of time without significant evaporation or change in viscosity.

Hydraunycoil FH 42 is the latest generation of hydraulic fluids for aircraft and missiles. It prevents component wear and seizure over a large temperature range. It can be used in hydraulic systems previously operated with H-537 (MIL-PRF-83282) or H-515 (MIL-PRF-5606) fluids.



APPLICATIONS

- Actuators and flap-control mechanisms of military and commercial aircrafts
- Landing gear shock strut of military and commercial aircrafts
- Helicopter and military hydraulic systems
- Hydraulic servo-controlled systems of missiles

SPECIFICATION * / OEM'S & AIRFRAMERS REFERENCE

- Approved MIL-PRF-87257 E
- Meets OX-538
- Listed in Airbus CML 02EBA1
- Listed in Comac CMS-OL-106

* **Approved:** The product has been approved by the relevant authority. The product is referenced on the applicable qualified product list.
Meets: The product complies with all the requirements of the specification and has not been formally approved or approval is in progress or the specification is obsolete.

CHARACTERISTIC	UNIT	TYPICAL RESULT	MIL-PRF-87257 E LIMITS	TEST METHOD
Density at 20°C	-	0.834	report	ASTM D4052
Appearance	-	limpid red oil	red oil	Visual
Kinematic Viscosity at 200°C at 100°C at 40°C at -40°C at -54°C	mm²/s	0.87 2.10 6.75 483 2286	- min. 2.0 min. 6.7 max. 550 max. 2500	ASTM D445
Low Temperature Stability, 72 h at -54°C	-	pass	no gelling, clouding, crystallization, solidification or separation	FED-STD-791-3458
Flash Point	°C	172	min. 160	ASTM D92
Fire Point	°C	188	min. 170	ASTM D92

Auto-Ignition Temperature	° C	345	-	ASTM E659
Pour Point	°C	-69	max. - 60	ASTM D97
Total Acid Number	mg KOH/g	0.03	max. 0.20	ASTM D664
Evaporation Loss, 6 h 30 at 135°C	%w	10.0	max. 20.0	ASTM D972
Foaming Test (tendency/stability) at 24°C	cm ³ /cm ³	25/0	max. 65/0	ASTM D892
Steel on steel wear, 4-ball machine, scar diameter after 1 h at 9.8 N after 1 h at 98 N after 1 h 392 N	mm	0.10 0.24 0.53	max. 0.21 max. 0.30 max. 0.65	ASTM D4172
Solid Particles Content SAE AS4059 5 - 15 µm 16 - 25 µm 26 - 50 µm 51 - 100 µm > 100 µm NAS 1638	 nb/100 cm ³ Class	 4000 150 40 10 1 4	 max. 8000 max. 1425 max. 253 max. 45 max. 8 max. 5	 FED-STD-791-3012
Elastomer NBR-L Compatibility, 168h at 70°C	%v	22	19.0 to 30.0	ASTM D4289
Water Content	mg/kg	57	max. 100	ASTM D6304

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.