



## LOW TEMPERATURE SYNTHETIC HYDRAULIC FLUID

**NATO CODE H-538 – MIL-PRF-87257B – OX-538**

### DESCRIPTION

Hydrauncoil 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 for a long period of time without significant evaporation or change in viscosity.

Hydrauncoil FH 42 is the latest generation of hydraulic fluids for aircraft (A380) 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.



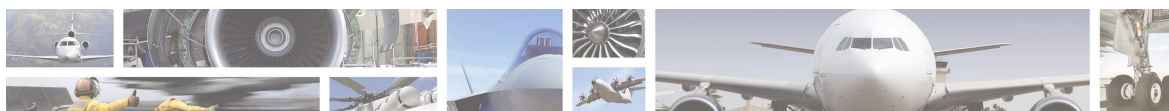
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### APPLICATIONS

- Shock strut fluid for landing gear absorber
- Helicopter systems
- Hydraulic fluid
- Landing gear fluid
- Fire resistant enhanced
- Leak testing
- Test bench
- Hydraulic actuators
- Missile hydraulic systems

Characteristic	Unit	Typical Result	MIL-PRF-87257 B Limits	Test method
- Density at 20°C	-	0.834	report	ASTM D 4052
- Appearance	-	limpid red oil	red oil	Visual
- Kinematic viscosity				
At 200°C		0.87	-	
At 100°C		2.10	min. 2.0	ASTM D 445
At 40°C	mm <sup>2</sup> /s	6.75	min. 6.7	
At - 40°C		483	max. 550	
At - 54°C		2286	max. 2500	
- 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 D 92
- Fire point	°C	188	min. 170	ASTM D 92
- Auto-ignition temperature	°C	345	-	ASTM E 659
- Pour point	°C	- 69	max. - 60	ASTM D 97
- Total acid number	mg KOH/g	0.03	max. 0.20	ASTM D 664
- Evaporation loss, 6 h 30 at 135°C	%w	10.0	max. 20.0	ASTM D 972
- Foaming test (tendency/stability) at 24°C	cm <sup>3</sup> /cm <sup>3</sup>	25/0	max. 65/0	ASTM D 892
- Steel on steel wear, 4-ball machine, scar diameter				
After 1 h at 9.8 N	mm	0.10	max. 0.21	ASTM D 4172
After 1 h at 98 N		0.24	max. 0.30	
After 1 h 392 N		0.53	max. 0.65	
- Solid particles content				
5 - 15 µm		2600	max. 10000	HIAC automatic counter
16 - 25 µm	nb/100	150	max. 1000	
26 - 50 µm	cm <sup>3</sup>	40	max. 150	
51 - 100 µm		10	max. 20	
> 100 µm		1	max. 5	
- Elastomer NBR-L compatibility, 168h at 70°C	%v	22	19.0 to 30.0	FTM-S-791-3603
- Water content	mg/kg	57	max. 100	ASTM D 1533

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.



TFH42-2E4a