



## SYNTHETIC AVIATION TURBINE OIL

NATO CODE O-148 - MIL-PRF-7808 L GRADE 3 - OX 9

AIRBUS CML 03ABB1 - ATR CML 03-003 - BOEING CML D00071 - BOEING CML D00109

### DESCRIPTION

Turbonycoil 160 is a 3 cSt oil at 100°C and is made of neopolyol esters containing additives to improve its anti-oxidant, anti-corrosion and extreme-pressure properties. It is designed to withstand the high temperature experienced by the military engines.



### APPLICATIONS

- Turbine oil of fighter engines (McDonnell Douglas F-15, Lockheed Martin F-16, etc.)
- Turbine oil of civil engines below -40°C ambient temperature
- Turbine and tail rotor gearbox of helicopter in cold weather
- APU of civil aircraft for easy in-flight restart
- Trimmable Horizontal Stabilizer (THS) of civil aircraft

CHARACTERISTIC	UNIT	TYPICAL RESULT	MIL-PRF-7808 LIMIT	TEST METHOD
Appearance	-	conform	limpid	visual examination
Density at 20°C	kg/dm <sup>3</sup>	0.957	report	ASTM D4052
Kinematic viscosity at 100°C at 40°C at -51°C after 35 min. at -51°C after 3 h	mm <sup>2</sup> /s	3.20 12.8 9600 9620	min. 3.00 min. 11.5 max. 17000 max. 17000	ASTM D445 ASTM D2532
Acid number	mg KOH/g	0.19	max. 0.30	ASTM D664
Flash point	°C	228	min. 210	ASTM D92
Evaporation loss, 6 h 30 at 205°C	%w	20.2	max. 30	ASTM D972
Static foam test at 80°C Foam volume / Collapse time	cm <sup>3</sup> / s	20 / 0	max. 100 / max. 60	FTM-S-791-3213
Lead corrosion, 1 h at 163°C	g/m <sup>2</sup>	- 0.8	max. +/- 9.3	FTM-S-791-5321
Oxidation & corrosiveness stability, 96 h at 200°C Acid number increase Viscosity change Insoluble matter Metal weight change Aluminium Silver Steel M/50 Iron Titanium Brass Magnesium	mg KOH/g % mg/100ml mg/cm <sup>2</sup>	2.0 + 14 None 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	max. 4.0 - 5 to + 25 max. 4.0 max. +/- 0.2 max. +/- 0.2 max. +/- 0.2 max. +/- 0.2 max. +/- 0.2 max. +/- 0.4 max. +/- 0.4	ASTM D4636
Solid particle contamination	mg/dm <sup>3</sup>	0.3	max. 5.0	FTM-S-791-3013

CHARACTERISTIC	UNIT	TYPICAL RESULT	MIL-PRF-7808 LIMIT	TEST METHOD
Trace metal content Ag, Al, Cr, Cu, Fe, Mg, Mo, Ni, Pb, Si, Sn, Ti, Zn,	mg/kg	0.0	max. 2.0	ASTM D5185 (Induction Coupled Plasma Spectroscopy)
Compatibility with standard elastomer SAE- AMS 3217/1 (NBR), 168 h at 70°C Swelling	% volume	28.0	12 to 35	FTM-S-791-3604
Compatibility with standard elastomer SAE- AMS 3217/4 (FKM), 72 h at 175°C Swelling Tensile strength change Elongation change Hardness change	% volume % % %	18.7 - 30 + 12 - 15	2 to 25 max. 50 max. 50 max. 20	FTM-S-791-3432
Compatibility with standard elastomer SAE- AMS 3217/5 (FS), 72 h at 150°C Swelling Tensile strength change Elongation change Hardness change	% volume % % %	8.8 - 18 - 14 - 16	2 to 25 max. 50 max. 50 max. 20	FTM-S-791-3432
Corrosion test, 50 h at 232°C Brass, weight change Silver, weight change	g/m <sup>2</sup>	0.0 0.0	max. 4.5 max. 4.5	FTM-S-791-5305

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.