NYCO
AERONAUTICS & DEFENCE

TURBONYCOIL 321

TECHNICAL DATA SHEET

PETROLEUM AVIATION TURBINE OIL — MS-8P

DESCRIPTION

Turbonycoil 321 is based on a petroleum base stock and contains additives to improve the high temperature oxidation stability and prevent wear of gas turbine engines. It has a viscosity of 8 cSt at 50°C.

APPLICATIONS

Turbonycoil 321 has been designed for the lubrication of the majority of gas turbines of Russian design. It can also be used as an anti-corrosion oil in closed circuit (MS-8RK). Turbonycoil 321 has been used since the early 1990's on civil airliners such as Tu-134, Tu-154 and Il-76 with hundreds of thousand flying hours accumulated.
It has been approved by CIAM (Central Institute of Aircraft engines) as an analog to the Russian type MS-8P. It is also approved by OEM Mashproekt for use on industrial & marine gas turbines.
Turbonycoil 321 is validated for use on the following engines/aircraft (military and civil):

ENGINES	AIRCRAFT
RKBM D-30 / D-30KP	Tu-134, Tu-154M, A-40, Il-76, Il-78, Il-62M
NPO Saturn AL-7F	Su-7, Su-9, Su-11, Su-17
Tumanski R-11	Mig 21, Jak-28, Su-15
NPO Motor R-95	Su-25, Su-28
RD-3M / RD-7M	Tu-16, Tu-22
Kuznetsov NK-8, NK-86	Tu-154, Il-62, Il-86
Progress AI-25	M-15, Jak-40, Mi-10
OMKB GTD-3F	Ka-25

Turbonycoil 321 is also recommended for a large number of APU (VCU) and turbocoolers fitted on Russian aircraft.

SPECIFICATIONS / OEM's & Airframers reference

- Analog to OST 38 01163-78
- Substitute to GOST 6457-66
- Substitute to TU 38 1011181-88
- Substitute to MK-8
- Analog to MS-8P
- Substitute to MK-8P
- Substitute to MS-8RK

* **Analog:** The product complies with the major requirements of the Russian specification. The product is referenced on the product list recommended for Russian aviation by the Central Institute of Aviation Motors (CIAM)

Substitute: The product has not been developed to meet the specification requirements but can be used as a substitute to the Russian product.

CHARACTERISTIC	UNIT	TYPICAL RESULT	LIMIT OST 38 01163-78	TEST METHOD
Appearance	-	limpid	-	Visual Examination
Density at 20°C	kg/dm^3	0.852	max. 0.875	ASTM D4052
Kinematic Viscosity **at 50°C** **at - 40°C**	mm^2/s	8.3 2600	min. 8.00 max. 4000	ASTM D445
Pour Point	°C	- 60	max. - 55	ASTM D97
Flash Point, COC	°C	156	min. 145	ASTM D93
Total Acid Number	mg KOH/g	0.01	max. 0.10	ASTM D974
Foaming Test at 24°C (tendency / stability)	cm^3/cm^3	30/0	max. 100/0	ASTM D892
Thermo-Oxidative Stability, 50 h at 150°C				GOST 23797
Total acid number	mg KOH/g	0.02	max. 0.4	
Viscosity at 50°C	mm^2/s	8.8	max. 10.0	
Viscosity at – 40°C	mm^2/s	3000	max. 5000	
Metal specimen weight change :				
Steel SHKH-15	mg/cm^2	0.0	nil	
Aluminium AK-4	mg/cm^2	0.0	nil	
Copper	mg/cm^2	0.0	max. +/ - 0.20	
Insoluble in isooctane	%w	0.0	max. 0.1	

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.