

RUBRIC BIO SYNT 46

High Performance Lubrication

DESCRIPTION

RUBRIC BIO SYNT 46 is an ester based high performance biodegradable hydraulic fluid which can be used in all available hydraulic systems.

Due to its readily biodegradability (OECD 301B 90 % after 28 days) and non-toxic character there is virtually no harm when using this product in applications where there might be a risk of spillage.

ADVANTAGES

- **Year around use.**

The very high Viscosity Index and the low pour point provide excellent lubrication under all circumstances. In low temperature applications (as low as -50 °C) the fluid will be thin enough to warrant an easy start without wear. At high temperatures (up to +95 °C) the product is thick enough to provide lubrication to prevent the pumps from wear.

- **Outstanding oxidation and thermal stability.**

RUBRIC BIO SYNT 46 has a great oxidation and thermal stability which will warrant a longer use than most competitive products (ester and vegetable oil based).

- **Outstanding Hydrolytic stability**

One of the special characters of **RUBRIC BIO SYNT 46** oil is the extreme hydrolytic stability. Due to the special production process the hydrolytic stability is much better than the one of most available competitive products.

- **Superior rust and corrosion protection.**

Due the fact that water is handled very well in this oil and the special additive technology used, the rust and corrosion protection is very good. This results in a trouble free operation of the equipment.

- **Anti-wear protection.**

The anti-wear additive technology together with the great performance of the Pine oil base stock provides an excellent anti-wear performance. Equipment will run longer without damage and therefore the use of Pine oil will reduce the maintenance costs.

- **Non-toxic and low odour.**

Due to the special production process Comet Pine oil has a very low odour and is completely non-toxic. This contributes to a more pleasant working environment.

TYPICAL CHARACTERISTICS

Characteristic	Typical Result	Test Method
Appearance	clear & bright	visual
Colour	1.5	ASTM D 1500
Viscosity, cSt at -30 °C	3400	
Viscosity, cSt at -20 °C	1300	
Viscosity, cSt at 0 °C	297	
Viscosity, cSt at 40 °C	43.2	ASTM D445
Viscosity, cSt at 100 °C	8.8	ASTM D445
Viscosity index	189	ASTM D2270
Density at 20 °C	0.929	ISO 12185
Pour point, °C	-41	ASTM D97
Cloud point, °C	-37	
Flash point, °C	292	ASTM D92
Acid value, mg KOH/g	0.2	
Iodine value (g I ₂ / 100 g)	134	
Foaming		
Sequence I	10/0 (14 s)	
Sequence II	20/0 (11 s)	
Sequence III	10/0 (13 s)	
4 ball wear test, wear scar (1 h, 40 kg), mm	0.74	ISO 20623
4 ball wear test, weld load, kg	126	ISO 20623
Demulsibility	39/38/3/50	
Copper corrosion	1a	

ENVIRONMENTAL PROPERTIES

Characteristic	Typical Result
Biodegradability (OECD 301B)	90 % (OECD 301D)
Renewable Content (%)	80
Algae EC50 (OECD 201)	> 1000 mg/ l
Daphnia EL50 48H (OECD 202)	> 1000 mg/ l
Acute Fish LL50 96 h (OECD 203)	> 1000 mg/ l
WGK Hazard Class	"nwg" (non-hazardous)

- **RUBRIC BIO SYNT 46** meets environmental requirements according to Swedish Standard SS 15 54 34.
- **RUBRIC BIO SYNT 46** is awaiting the European Ecolabel.

APPLICATIONS

RUBRIC BIO SYNT 46 can be used in almost all hydraulic systems driven by piston, gear and vane pumps.

The oil can be used when fine filters are installed. There is no loss of additive performance up to 3 microns.

RUBRIC BIO SYNT 46 is compatible with all common mineral hydraulic oils and synthetic esters.

RUBRIC BIO SYNT 46 is compatible with the most commonly used paints and elastomers. Note: some competitive products do have a negative effect on elastomers. When changed over to Comet Pine oil the condition of the elastomer must still be in a reasonable condition in order to not cause any leakage.

Seal compatibility	FPM	NBR1	EPDM
Change in mass (%)	0.2	0.9	28.5
Change in volume (%)	0.4	1.7	33.1
Change in Hardness (pts)	-0.7	-1.7	-12.0
Change in resistance to breakage (%)	-2	-2	-40
Change in elongation to breakage (%)	3	-4	-29

IMPORTANT NOTICE

All information and rules about health, safety and the environment are mentioned on the safety data sheet. It provides information about risks, safety procedures and first aid emergency rules. It clarifies all procedures to implement in the case of an accidental spillage, and for the disposal of the product and its effects on the environment.

Our product contains natural additives which are likely to modify the colour of the concentrates without altering its performance. The specifications of our products are definite only at the time of order, and are subject to our general sale and guarantee conditions. To give our customers the latest technical developments, the general characteristics of our products may vary. The safety data sheet of this product is available at www.motul.com