RENOLIN DTA

Highly oxidation resistant hydraulic and lubricating oils

Description

The **RENOLIN DTA series** are based on high grade special paraffinic raffinates with a specially balanced mix of additives to improve oxidation stability and corrosion protection .The **RENOLIN DTA** series of products also fulfill and exceed the requirements of DIN 524 51 part 1 for HL hydraulic oils and DIN 517 51 part 2 for CL lubricating oils.
This range of products display the following characteristics:

High oxidation stability and resistance to ageing

Working temperatures of over 80°C in oxygen-rich atmospheres and long periods of service require the oil to be chemically stable .Insufficient oxidation stability can lead to the formation of harmful by-products which acidify the oil by means of polymerization and cause the viscosity to increase . Lacquer-like deposits on valves and control units can also occur.

The **RENOLIN DTA** series of oils are based on highly oxidation stable special paraffinic “steam turbine” raffinates .They contain additives which increase oxidation stability .The **RENOLIN DTA** series of oils maintain these features throughout their long service life and thus guarantee machines filled with these products the highest possible operational reliability.

Good natural viscosity-temperature behaviour

The base oils used in the RENOLIN DTA series of products display an excellent natural viscosity index .The high natural viscosity index results in relatively small temperature related viscosity changes .This characteristic significantly reduces starting-phase resistance at low temperatures and ensures sufficient lubrication at high temperatures.

Fast air separation and low foaming

In systems which must lubricate fast running bearings and spindles with small oil tank volumes, there is danger that accelerated wear can take place due to the lubricating film being broken down as a result of excessive foaming .The carefully selected oils which form the basis of the RENOLIN DTA series of products reduce the trapped air-bubble problem .The oils display excellent air separation properties :trapped air bubbles escape quickly and thus reduce foaming.

Excellent corrosion protection for steel and non-ferrous metals

DIN 585 51 stipulates that corrosion protection properties are tested on steel in the presence of oil and distilled water .No corrosion was recorded after this test was carried out with the **RENOLIN DTA** series of products .The same applied to the test on non-ferrous metals .Practically, this means that all machine tool components are well protected against corrosion.

Optimum demulsifying properties

Many operators of machines which run with large oil volumes, for examples, large hydraulic complexes and central lubrication systems in the paper and

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mining industries require the oil and any water or condensate present to separate quickly so that it can be drained off from the tank .The RENOLIN DTA oils separate from water very effectively and thus avoid the formation of dangerous emulsions and foam.

Compatability with sealing materials

Elastomers which come into contact with hydraulic fluids must neither expand nor contract .The RENOLIN DTA series of hydraulic oils were therefore tested for 168hours at 100□C according to DIN 521 53together with DIN 505 53, to examine their effect on sealing materials .The test seal materials was the DIN 524 51standard reference elastomer SRE+NBR (Nitrite-Butadiene Rubber)

Sealing material manufacturers can in general use these results to establish the compatibility of commonly-used elastomers with the tested fluids.

As the test results overleaf show, the RENOLIN DTA series of oils display excellent compatibility with elastomers.

Further application instructions

The RENOLIN DTA products offer users a series of top quality oils which can be used as hydraulic oils, but also because of their excellent lubricating properties, as an oil for closed circulation systems which lubricate bearings, gearboxes, regulators, vacuum pumps and high pressure compressors.

The products at the high viscosity end of the range should be used when high temperatures and loads, low speeds and large bearing-play conditions exist, such as in paper manufacturing and calendaring machines and in the central lubricating systems of rolling machines in general .The RENOLIN DTA series of oils can also be used when the machine manufacturer recommends an HL hydraulic oil conforming to DIN 524 51 part 2 or a CL lubricating oil conforming to DIN 517 51part 2.

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Typical Technical Data

Properties	Unit	32	46	68	100	Test Method
ISO VG	-	32	46	68	100	
Appearance	-	Bright clear				Visual
Colour	-	0.5	1.0	1.0	1.0	ASTM D 1500
Density @ 30°C	g/ml	0.862	0.866	0.872	0.878	ASTM D 1298
Kinematic viscosity						
at 40°C	cSt	32	46	68	100	ASTM D445
at 100°C	cSt	5.4	6.8	8.7	11.2	ASTM D445
Viscosity Index	-	101	102	100	98	ASTM D 2270
Flash point (COC)	°C	222	228	248	250	ASTM D 92
Pour point	°C	-9	-9	-9	-9	ASTM D 97
Neutralisation number	mgKOH/g	<0.1	<0.1	<0.1	<0.1	ASTM D 974

Typical Technical Data

Properties	Unit	150	220	320	460	Test Method
ISO VG	-	150	220	320	460	
Appearance	-	Bright clear				Visual
Colour	-	1.5	1.5	2.0	2.0	ASTM D 1500
Density @ 30°C	g/ml	0.882	0.886	0.889	0.896	ASTM D 1298
Kinematic viscosity						
at 40°C	cSt	150	220	320	460	ASTM D445
at 100°C	cSt	14.6	18.8	24.2	30.6	ASTM D445
Viscosity Index	-	96	95	95	95	ASTM D 2270
Flash point (COC)	°C	266	280	280	315	ASTM D 92
Neutralisation number	mgKOH/g	<0.1	<0.1	<0.1	<0.1	ASTM D 974

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