

ELEKTRION R-S

Description

ELEKTRION R-S is a mixture of a polymer of natural vegetable oil and a special low sulphur hydro treated solvent Bright Stock, modified through a 96 hours Unik Elektrionisation process providing simultaneously the seventeen following main properties of this Unik oiliness component:

1. An extremely high polarity to improve adsorption of the film on surface and extreme tackiness
2. A reduction of 50 % of total amount of polyunsaturated fatty acid to improve oxidation performance
3. An increase of 350 % of total amount of saturated fatty acid to improve oxidation performance
4. A better oxidation performance to increase the shelf life of the lubricant
5. A high viscosity
6. An Ultra high viscosity index
7. A very high flash point
8. A very high fire point
9. A very low volatility (Noack test)
10. An improved coefficient of friction (HFRR Test, 4 ball test, Falex test)
11. An improved level of anti-wear (HFRR Test, 4 ball test, falex test)
12. An ashless component
13. A phosphorus free component
14. A mid sulphur component
15. A cleanliness component
16. An ashless dispersant to maintain in suspension nanoparticles, carbon, soots, metals, ptfе, etc
17. An inactive sulphur component

The presence of solvent Bright Stock and the duration of 96 hours of the process, provides higher level of polarity and extra adherence of the Elektrionised molecules on the surface. This adherence is very powerful and withstands an unusually broad range of temperatures and shear. The high viscosity provides an effective protection against wear, by covering the surface in contact with a thick film which separates even high asperities. The higher flash point of Solvant Bright Stock allows the film to resist through the higher temperatures at the contact points.

Typical characteristics

Characteristic	Method	Typical	Specifications	
			Min	Max
Density @ 15°C	ASTM D 7777	0.9152	0.89	0,93
Color	-	Yellow	-	-
Viscosity @ 50°C (mm²/s)	ASTM D 7042	1535	1480	1600
Viscosity @ 40°C (mm²/s)	ASTM D 7042	2534	-	-
Viscosity @ 100°C (mm²/s)	ASTM D 7042	262,8	-	-
Index Viscosity	ASTM D 2270	249	-	-
Flash point °C <i>Cleveland Open Cup</i>	ASTM D 92	308		
Fire point °C <i>Cleveland Open Cup</i>	ASTM D 92	336		
Mineral oil content (% m/m)	-	50	-	51
Vegetable oil content (% m/m)	-	50	49	-
Shelf life (year)	-	3	2	-

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Applications

ELEKTRION R-S is used as part of the additives system. ELEKTRION R-S is also used in other cases, as base oil with an extra High VI of 249 to replace the need of VI improver, in lubricants and greases where high oiliness and high lubricity are required, together with high temperature stability, lower viscosity, high shear stability, extra high flash and fire point; combined with a very low Noack Value.

Typical applications are:

- Lubricity additive for low viscosity oils
- Higher Performance about Anti-stick-slip and anti-noise additive
- Friction modifier
- Limited Slip performances for Axle Gear Oil
- Performance Anti Squawk for wet brakes and U.T.T.O fluid
- Ashless dispersant
- Anti-wear additive
- Mould release agent for metals and glass
- Base for solid colloidal lubricants
- Lubricity in milky and semi-synthetic soluble oil

Appearance

ELEKTRION R-S is naturally hazy due to the presence of stearic matters (C18-0 saturated fatty acid). This haziness is proof of its natural character; it disappears upon blending >55°C.

Packaging

Drum of 180 kg (usually in stock);

IBC of 900 kg (upon request) shelf life is reduced to 1 year in plastic packaging.

Reach Status

ELEKTRION R-S is classified as a mixture or a preparation according to R.E.A.C.H regulation.



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