TRIBOL® 1421
HIGH TEMPERATURE CHAIN OILS

Product Data Sheet

Tribol 1421 High Temperature Chain Oils are synthetic, premium quality products formulated for the most demanding high temperature chain applications in the industry. They provide a unique and unsurpassed combination of extremely low volatility and low residue formation tendency, which allows for reduced lubricant consumption.

Tribol 1421 Oils are part of the Castrol Performance Lubricants' Eco-Solutions™ product offering. Formulated to address environmental concerns, they are free of antimony and barium. In addition, Tribol 1421 is a H2 rated lubricant suitable for use in meat and poultry packaging plants.

DESCRIPTION

Tribol 1421 High Temperature Chain Oils are manufactured from a blend of esters and synthetic fluids selected for their favorable volatility characteristics as well as their physical and chemical stability at high temperatures with extremely low residue forming tendencies.

Tribol 1421 lubricants can support fluid film lubrication on chain pins over a broad high temperature range. The lubricants contain anti-wear additives for additional protection in boundary lubrication from surging loads and extreme temperatures.

Tribol 1421 lubricants contain inhibitors against corrosion and oxidation.

APPLICATIONS

Tribol 1421 High Temperature Chain Oils are designed and most effective for chain operating temperature applications between 350°F/175°C (the point at which synthetics become cost effective) and 575°F/300°C. Tribol 1421 maintains peak performance over the entire temperature range.

With more frequent relubrication, Tribol 1421 continues to perform at temperatures beyond 575°F/300°C.

Tribol 1421 lubricants are designed for the lubrication of roller chains, slides, cams and general lubrication where a high temperature synthetic lubricant is needed.

Major applications include industries using high temperature conveyor systems used for baking, coating, drying and curing.

Product application may be achieved by drip, spray, splash and automatic dispensing equipment. Use of an automatic lubrication system is recommended to benefit the most from the use of Tribol 1421.

ADVANTAGES

Application rate and frequency can be minimized due to extremely low volatility. Lubricant consumption is minimized.

Minimal residue forming tendency and cleansing action virtually eliminates shutdowns for periodic cleaning of equipment.

Dissolves and facilitates removal of pre-existing gum, varnish and carbonaceous residues.

Dripping and blow-off are minimized by reduced lubricant application requirements.

Excellent fluid film and anti-wear properties result in extended chain life and potential for energy reduction.

Fire and explosion possibilities are minimized due to extremely low volatility. Safety and environmental conditions are improved.

Overall cost reduction is accomplished by extended lubrication cycles, reduced contamination, decreased downtime for maintenance and repair, and longer parts life.

NOTES

Tribol 1421 High Temperature Chain Oils are compatible with petroleum and most synthetic based lubricants. While Tribol 1421 can dissolve even hardened chain deposits from the previously used lubricant, it is recommended to clean the chain thoroughly before changeover to Tribol 1421 to realize maximum benefits. If this is not feasible, run chain through several cycles under no-load conditions when first applying Tribol 1421.

Tribol 1421 should not be used around parts containing polycarbonates as it can have a softening effect. Under no circumstances should it be used where neoprene seals are used.

For specific terms, conditions, warranty and availability, refer to the price list in effect at time of purchase.

Please See Reverse Side for Typical Properties

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Typical properties	1421/150	1421 SG	1421/680
ISO Viscosity Grade, ASTM D 2422	150	None	680
Specific Gravity, ASTM D 1298 @ 15.6°C/60°F	0.943	0.941	0.940
API Gravity, ASTM D 1298 @ 15.6°C/60°F	18.6	15.9	19.1
Viscosity, ASTM D 445, D 2161			
@40°C,cSt	150	276	696
@100°C,cSt	16.3	27	52.5
@100°F,SUS	782	1444	3687
@210°F,SUS	85	133	254
Viscosity Index, ASTM D 2270	115	129	132
Flash Point, ASTM D 92, COC, °C/°F	271/520	271/520	260/500
Fire Point, ASTM D 92, COC, °C/°F	299/570	304/580	299/570
Auto Ignition Temperature, °C/°F	400/752	410/770	>410/770
Rust Preventive Characteristics, ASTM D 665A	Pass	Pass	Pass
Pour Point, ASTM D 97, °C/°F	-43/-46	-36/-33	-29/-20
Conradson Carbon Residue, ASTM D189 wt. %	0.08	0.08	0.05
Falex Wear Test, ASTM D 2670			
Number of Wear Teeth	+6	+9	+1
Falex EP Direct Load			
Fail Stage, lbs.	1250	1250	1750
Four Ball Wear Test (40 kg, 75°C/167°F, 1800 rpm, 1 hr) Scar Diameter, mm	0.39	0.39	0.36
TGA – Thin Film Volatility			
Isothermal @ 200ºC/392ºF, 60 ml/min. airflow			
Time to 50% mass remaining, hr.	>10	>10	>10
Isothermal @ 225°C/437°F, 60 ml/min. airflow			
Time to 50% mass remaining, hr.	>10	>10	>10
Isothermal @ 250°C/482°F, 60 ml/min. airflow			
Time to 50% mass remaining, hr.	3.3	5.5	5.0
Isothermal @ 275ºC/525º, 60 ml/mm airflow			
Time to 50% mass remaining, hr.	1.30	1.30	1.50

Subject to usual manufacturing tolerances.