



Tribol MWO LS

Slideway oils

Description

Castrol Tribol™ MWO LS way oils are used for the lubrication of machine tool slides and ways. Tribol MWO 20LS and 40LS are ISO Viscosity Grades 68 and 220, respectively. These unique way oils are intended for use where solid lubricants cannot be used for cosmetic or other reasons. Tribol MWO LS way oils offer excellent thin-film wear protection due to a proprietary blend of anti-wear, extreme pressure (EP) and friction-modifying agents which perform synergistically in combination. When subjected to the extreme pressure of contacting asperities these additives convert to low-shear compounds on working surfaces, lubricating much like solid-film lubricants. Because the additives in Tribol MWO LS way oils are fully dissolved but act like solid lubricants in service, the products are designated "LS" for "Liquid Solids." The high quality base oils in Tribol MWO LS way oils are selected for their ability to maintain strong film integrity even under great stress. Additional compounding with select polymers adds both adhesive and cohesive characteristics to these products. Tribol MWO LS way oils are not corrosive to ferrous or non-ferrous metals and rust and oxidation inhibiting characteristics are maximised to afford effective rust protection and long life of the oil. Tribol MWO LS way oils are "low phenol" products, typically containing less than 2 ppm of phenolic compounds.

Application

Tribol MWO LS way oils are recommended where the use of lubricating solids may be restricted due to manufacturer's requirements, very fine filtration, or concerns about solids contaminating the manufacturing process. They are also suitable for lubricating many components of machine tools, including slides and ways, plain and antifriction bearings, translating screws, headstock gears, and some circulating systems.

Tribol MWO LS way oils are especially useful in applications where non-drip characteristics are desirable to reduce oil loss or control "fly-off" from cams, eccentrics, conveyors, press shaft bearings, and in worn and older machines with expanded clearances. Other important uses for Tribol MWO LS way oils include the lubrication of chains and wire ropes where good adhesion and tackiness are needed, particularly where there is the potential for heavy condensation or water-wash.

Tribol MWO LS way oils are not intended for use in hydraulic systems or some circulating systems that serve both ways and critical hydraulics.

Advantages

- Tribol MWO LS way oils special formulation is most effective in the elimination of "stick-slip" and "chatter" on all ways, vertical and horizontal.
- The clear appearance and non-drip nature can reduce the soilage of production and housekeeping problems as well.

Typical Characteristics

Name	Method	Units	20 LS	40 LS
ISO Viscosity Grade	-	-	68	220
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m ³	900	900
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm ² /s	69.5	217
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm ² /s	8.2	16.8
Viscosity Index	ISO 2909 / ASTM D2270	-	82	78
Pour Point	ISO 3016 / ASTM D97	°C/°F	-30 / -22	-21 / -6
Flash Point - open cup method	ISO 2592 / ASTM D92	°C/°F	190 / 374	220 / 428
Rust test - distilled water (24 hrs)	ISO 7120 / ASTM D665A	-	Pass	Pass
Rust test - synthetic seawater (24 hrs)	ISO 7120 / ASTM D665B	-	Pass	Pass
Carbon residue - Conradson test	ISO 6615 / ASTM D189 / DIN 51551	%wt	0.05	0.06
Timken OK Load test	ASTM D2782	kg / lb	27 / 60	27 / 60
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ASTM D2266	mm	0.4	0.4
Four Ball Weld Load test - Load Wear Index	ASTM D2783	kgf	55	57
Four Ball Weld Load test - Weld Point	ASTM D2783	kgf	315	315
Antiwear test - Falex Pin & V-Block	ASTM D 2670	Teeth Wear (number)	5	5
Stick-slip ratio - Cincinatti Lamb test	Cincinatti Lamb test	Ratio	0.73	0.73
Tribol solids, grade classification	-	-	Contains no solids	

Subject to usual manufacturing tolerances.

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