Product Data

CASTROL TRIBOL® 1060™
Way oils

DESCRIPTION

- Castrol Tribol® 1060 way oils were designed specifically to lubricate the slides and ways of machines tools of all sizes. They also demonstrate the performance necessary to operate as gear and hydraulic oils, thus making them the lubricant of choice for the total machine tool.
- Reciprocating way tables an machine tools must stop and start again at each change of direction. The oil film at standstill is squeezed to a minimum thickness, allowing metal asperities (microscopic high spots) an opposing surfaces to interlock, even if the oil film is not broken. If microscopic welds occur an impact, then erratic motion called "stickslip" occurs at the breakaway as the table reverses. This action, also called "chatter", manifests itself in poor finish and even in loss of tolerance of the parts being machined. Castrol Tribol® 1060 way oils demonstrate outstanding resistance to stick-slip, showing excellent results in three different test procedures.
- Equally important is the way oil's ability to separate from cutting fluid emulsions. The formation of stable emulsions of the way oil in the cutting fluid compromises the film of lubricant an the slideway and also leads to contamination of the cutting fluid in the tank and circulating system. Castrol Tribol® 1060 way oils show excellent demulsification characteristics, as demonstrated by the Schmidt demulsification test with 12 different, commercial cutting fluid emulsions.
- The high quality base oils in Castrol Tribol® 1060 way oils have been selected for their ability to maintain strong film integrity even under great pressure.
- Additional compounding adds both adhesive and cohesive characteristics to these products.
- Wear protection and resistance to stick-slip are provided by a carefully developed package of Performance additives.
- Castrol Tribol® 1060 way oils are not corrosive to ferrous or non-ferrous metals. Rust and oxidation inhibiting additives are present to afford rust protection and long life of the oil.

APPLICATIONS

- Because of its tackiness Castrol Tribol® 1060 way oils stays in place and does not contaminate the workshop environment.
- Energy savings result from the reduced friction an the way surfaces.
- The lifetime of Castrol Tribol® 1060 way oils in machine tool circulating systems is improved through the use of antioxidants.

Castrol Tribol® 1060 saves
- Repacement parts
- Production down-time costs
- Manpower costs
- Energy costs.

ADVANTAGES

- Intended applications of Castrol Tribol® 1060 way oils are in machine tools, including circulation systems primarily for the lubrication of ways and slides.
- Castrol Tribol® 1060 way oils are also qualified for the lubrication of other machine tool components, including plain and antifriction bearings, translating screws, gears such as are used in head stocks and speed change units, as well as hydraulic systems.
- Castrol Tribol® 1060 way oils are widely used in general applications where a non-drip characteristic is desirable to reduce oil loss or "fly-off" from cams, eccentrics, conveyors, press shaft bearings, or from machines, which from long use or earlier wear conditions, have expanded clearances.
- Application of Castrol Tribol® 1060 way oils may be by oil can, oil cup, reservoir, or by circulation or dispensing systems designed for way oils.

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Product Data

Technical data

	Unit	Value		Test method
TRIBOL® 1060 Way oils	**-**	**1060/68**	**1060/220**	**-**
ISO Viscosity grade	-	68	220	DIN 51519
Density at + 15°C	kg/m³	873	893	DIN 51757
Viscosity at + 40°C + 100°C	mm²/s	68 8.7	215 19.3	DIN 51366
Flashpoint	°C	190	200	DIN ISO 2592
Pourpoint	°C	- 30	- 24	DIN ISO 3016
Rush test Test A (Distill. Water) Test B (Synth. Seawater)	Rating	0 0		DIN 51585
Copper Corrosion test (120°C, 24 hours)	Rating	1		DIN 51759
Demulsibility, 40/40/0	min.	10	20	ISO 6614
Foam test 25°C 95°C 25°C after 95°C	ml	0 30/0 0		DIN 51566
Four Ball wear test Wear scar diameter	mm	0.30		DIN 51350-03-B
Four Ball weld load	N	2400/2600		DIN 51350-02
Brugger Value	N/mm²	35		-
FZG test (A/8,3/90) Scoring load stage	-	> 12		DIN 51354
Cincinatti “stick-slip”-Coefficient	-	0.76		-
Schmidt inclined tribometer plastic/cast iron cast iron/cast iron	µ	0.084 0.213		-
Schmidt demulsification test Time to pass with all 12 fluids	h	1		-

1 mm²/s ≙ 1cSt

Tribol 1060
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Die technischen Daten sind Durchschnittswerte, die jedoch innerhalb der festgelegten Spezifikation liegen.
Diese Angaben entsprechen umfangreichen Prüfungen und Praxiserfahrungen. Bei der Vielfalt der Anwendungen kann daraus keine Verbindlichkeit für die Bewährung in jedem Einzelfall hergeleitet werden. Praxiserprobungen empfohlen. Änderungen der Zusammensetzung bleiben Vorbehalten, gegebenenfalls in Absprache mit dem Kunden.
Weitere Produkt-Informationen sind bei der Anwendungstechnik der Deutsche BP Aktiengesellschaft zu erfragen.

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