



Molub-Alloy™ GM 170W/680

Gear oil

Description

Castrol Molub-Alloy GM™ 170W/680 (previously called Molub-Alloy 170W/680) is manufactured from the highest quality components, carefully selected for their compatibility with Castrol Molub-Alloy GM lubricating solids. Metallic lubricating solids of suitable grade are treated to increase their natural positive affinity to metal surfaces and are completely dispersed to assure effectiveness during the lubricant's full working life.

The viscosity of Molub-Alloy GM 170W/680 is within the range of ISO VG 680, SAE 140, and AGMA 8 Comp. specifications.

Load carrying capabilities are inherent in the Molub-Alloy GM formulation which is non corrosive to all ferrous and non-ferrous metals. Rust and oxidation inhibiting characteristics are maximized to afford effective rust protection and long life of the oil. Foaming is controlled by the use of special components and inhibitors.

Application

Molub-Alloy GM 170W/680 is a special lubricant developed specifically for enclosed worm gear drives, where a hardened steel worm typically meshes with a bronze gear.

Application methods are by dip, spray mist, automatic dispensing equipment, central oiling or circulating systems, or by filling the worm gear housing.

Advantages

- Reduced friction, most evident under boundary conditions, is directly attributed to the presence of a proprietary blend of lubricating solids. This benefit is most pronounced where frequent start-up, slow speeds and high and unexpected loads are encountered.
- Substantial increase in the working life of both parts and lubricant is provided by the establishment of a protective layer of Molub-Alloy GM solids. This will result in an increased load bearing area which reduces unit pressures, operating temperatures and wear.
- Overall savings are derived from the above noted advantages and result from less labour and downtime, smoother, more efficient operation with longer parts life, and extended lubrication cycles.
- This lubricant satisfies both the worm gear manufacturer's lubricant requirements, and the consumer's demands for extended lubricant service life.

Typical Characteristics

Name	Test Method	Unit	GM 170W/680
ISO Viscosity Grade	ASTM D 2422		680
AGMA Lubricant number			8 Comp.
Density @ 15°C / 59°F	ASTM D4052 / ISO 12185	kg/m ³	910
Kinematic Viscosity @ 40°C / 104°F	ASTM D 445 / ISO 3104	mm ² /s	680
Kinematic Viscosity @ 100°C / 212°F	ASTM D 445 / ISO 3104	mm ² /s	40
Viscosity Index	ASTM D2270 / ISO 2909		97
Pour Point	ASTM D97 / ISO 3016	°C/°F	-9/16
Flash Point - open cup method	ASTM D92 / ISO 2592	°C/°F	244 / 471
Rust test - distilled water (24 hrs) / Rust test - synthetic seawater (24 hrs)	ASTM D665A / ASTM D665B / ISO 7120	Rating	Pass
Copper corrosion (3 hrs@100°C/212°F)	ASTM D130 / ISO 2160	Rating	1b
FZG Gear Scuffing test - A/8.3/90	ISO 14635-1		>12
Timken Extreme Pressure Test, OK Load	ASTM D2782	kg/lbs	27/60
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ASTM D2266	mm	0.34
Four Ball Weld Load test - Load Wear Index	ASTM D2783	KGF	56 - 315
Four Ball Wear test - Weld Load	DIN 51350-2	N	3000
Four Ball Wear test - Wear Scar Diameter (300N / 1 hr)	DIN 51350-3B	mm	<0.40

Subject to usual manufacturing tolerances.

Additional Information

Molub-Alloy GM 170W/680 cannot be used in conjunction with diatomaceous earth filters.

This product was previously called Molub-Alloy 170W/680. The name was changed in 2015.

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