Product Data

MOLUB-ALLOY®

Gear Oil Services

Description

MOLUB-ALLOY® Gear Oils are for service in all types of enclosed gear drives. They contain a proprietary blend of lubricating solids and come in six ISO and AGMA viscosity grades. **MOLUB-ALLOY®** Gear Oils also meet the requirements of API Service Classification GL-4. **MOLUB-ALLOY®** Gear Oils are part of Tribol's Eco-SolutionsTM product offering. Formulated to address environmental concerns, they are free of lead, chlorinated solvents, and barium. They contain less than 2 ppm of phenol.

MOLUB-ALLOY® Gear Oils are manufactured from the highest quality components, which have been carefully selected for their compatibility with **MOLUB-ALLOY®** lubricating solids and their recommended applications. Load carrying capabilities are derived from Molub-Alloy's formulation and the proprietary blend of lubricating solids. These metallic lubricating solids are treated to increase their natural affinity for metal surfaces. Importantly, they are completely dispersed to assure effectiveness over the life of the oil.

Rust and oxidation inhibiting characteristics are maximized to afford effective rust protection and long service life. High VI (Viscosity Index) enables these lubricants to accommodate wide temperature fluctuation. Foaming is prevented by unique compounding techniques and inhibitors.

Application

MOLUB-ALLOY® Gear Oils are recommended for spur, helical, herringbone, and straight or spiral bevel gears. They are especially suited for heavy duty and shock loading where extreme pressure (EP) characteristics are needed. They should not be used where gear manufacturers specify the use of non- EP lubricants.

MOLUB-ALLOY® Gear Oils are used satisfactorily in enclosed worm gear drives, including moderately severe service. **MOLUB-ALLOY®** Gear Oils may be used in hypoid gears where API GL-4 Service Classification is specified. Range of **MOLUB-ALLOY®** Gear Oil Viscosities

- ISO VG 150-1500
- AGMA 4 EP to 9 EP+
- AGMA 4 EP to 9 EP

MOLUB-ALLOY® Gear Oils can be applied by oil can, oil cup reservoir, splash, spray mist, or by automatic dispensing equipment, central oiling or circulation systems.

Benefits and Qualities

Reduced friction, most evident under boundary conditions, is directly attributed to the presence of specially compounded lubricating solids. This benefit is most pronounced where frequent start-up, slow speeds, and high or 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 solids. This increases load bearing areas, which can reduce unit pressures, operating temperatures, and wear.

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Energy savings are possible through a reduction in peak power demand during cold start-up. Seal leakage is greatly reduced. Only compatible base oils that control rubber swelling tendencies are used. The Molub-Alloy solids lubricate and improve seal contact surfaces. Overall savings are derived from the above and result from less labour and downtime, smoother, more efficient operation with longer parts life and extended lubrication cycles.

Method of Use

MOLUB-ALLOY® Gear Oils cannot be used with diatomaceous earth or any other adsorbent, surface active filter media.

Technical Data

Typical Properties	**Molub-Alloy Gear Oils**			
	90	**690**	**140**	**300S**
ISO Viscosity Grade, ASTM D 2422	220	320	460	1000
AGMA Lubricant Number	5EP	6EP	7EP	8A EP
SAE Viscosity Classifcation	90	90	140	250
API Service Classifaction	GL-4	GL-4	Gl-4	Gl-4
Specification Gravity, ASTM D 1298 @ 15.6°C	0.8944	0.9106	0.9350	0.9160
Viscosity, ASTM D 445 @40°C, cSt @60°C, cSt @100°C, cSt	218 18.8	331 24.7	468 30.6	1050 320 51.6
Viscosity Index(VI), ASTM D 2270	96	96	95	94
Flash Point, ASTM D 92, COC, °C	232	323	323	227
Fire Point, ASTM D 92, COC, °C	263	266	266	261
Pour Point, ASTM D 97 °C	-23	-15	-15	-7
Rust Test, ASTM D 665 Procedure A (Distilled Water) Proceedure B (Synthetic Sea Water)	 Pass Pass	 Pass Pass	 Pass Pass	 Pass Pass
FZG Test, (A/8.3/90, A/16.6/90) Load Stages Passed	12+	12+	12+	12+
Timken EP Test, ASTM D 2782 OK Load, kg/lbs	32/70	32/70	32/70	32/70
Four Ball Wear Test, ASTM D 4172 Scar Diameter, mm	0.40	0.40	0.40	0.40
Four Ball EP Test, ASTM D 2783 Load Wear Index, kg Weld Load, kg	 60 400	 60 400	 60 400	 60 400
Falex Wear Test, ASTM D 2670, wear teeth	5	5	5	5
Falex EP Test, ASTM D 3233 B, lbs	2000	2000	2000	2000
Molub-Alloy Solids Grade Classification	---Fluid Lub---			

Subject to Usual Manufacturing Tolerances