Mobil

Mobilgear MS Series

Mobil Industrial , Japan

Gear Oils

Product Description

Mobilgear™ MS Series are extra high performance oils designed for the oil-fog or mist-lubrication of machine components such as slideways, bearings, gears, chains etc. They are formulated from high quality, solvent refined base stocks and a unique additive system designed for optimum reclassifying properties. They have a high resistance to oxidation and good extreme pressure and anti-wear properties. The products have enhanced surface wetting capabilities and they reclassify (or agglomerate) readily from a mist to a liquid when the mist is subjected to extreme turbulence or is impinged onto a surface at high velocity. This allows a lubricating film to form on bearings and gears and prevents stray mist from escaping through narrow apertures into the atmosphere.

The four viscosity grades in the Mobilgear MS Series, ranging from ISO VG 32 to 460, allow the machine designer to choose the product most suitable for proper mist lubrication of machine elements. The heavier grades are used on ways, gears, and slow-speed, heavily loaded bearings, while the lower viscosity grades are used in high-speed bearings.

Features and Benefits

The Mobilgear MS Series of products is an important member of the Mobil brand of lubricants and enjoy recognition among equipment operators for their superb performance capabilities in misting applications. Mobilgear MS Series oils were developed specifically for mist applications and have undergone an arduous protocol of testing, including misting performance, in their development.

Mobilgear MS Series offer the following features and potential benefits:

Features	Advantages and Potential Benefits
Superior mist forming and reclassifying properties	Ensures even distribution of lubricant on machine parts with control of stray mist for reliable lubrication and problem-free operation, reduced leakage and lower oil consumption
Excellent EP and anti-wear performance	Prevents machine element wear with resulting savings in maintenance and parts replacement
High quality base oil and additive components	Avoids reclassifier plugging problems which can result in catastrophic bearing and gear failure, with accompanying downtime and replacement costs
Excellent resistance to oxidation	Long product life, reduced product and maintenance costs
Very good rust protection including sea water	Excellent equipment protection

Applications

Mobilgear MS Series oils are designed for use in all oil mist lubrication systems. Such systems work by dispersing very small droplets of oil in smoothly flowing air, distributing the oil mist to the points of application and mechanically condensing the mist, causing the oil to impinge on and wet the surfaces to be lubricated. The higher viscosity Mobilgear MS grades may require thermal misting devices to form proper dispersions when ambient temperatures are moderate or low. Mobilgear MS is suitable for oil / air delivery systems such as airline oilers. Specific applications include:

- Industrial gearing such as cooling tower gearboxes
- Slow-speed, heavily-loaded bearings (higher viscosity grades)
- High-speed bearings (lower viscosity grades)
- Machine tools, ways and screws

- Process pumps, electric motors and blowers
- Steam turbines and electric motors

Properties and Specifications

Property	32	100	320	460
Grade	ISO 32	ISO 100	ISO 320	ISO 460
Density @ 15.6 C, kg/l, ASTM D4052	0.88	0.89	0.90	0.90
EP Properties, Timken OK Load, lb, ASTM D2782		65	65	65
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	12+	12+	12+	12+
Flash Point, Cleveland Open Cup, °C, ASTM D92	210	234	230	238
Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2783		48	48	48
Four-Ball Extreme Pressure Test, Weld Load, kgf, ASTM D2783		250	250	250
Four-Ball Wear Test, Scar Diameter, 20 kg, 1800 rpm, 1 h, 54 C, mm, ASTM D4172		0.3	0.3	0.3
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	5.5	11.2	25	31.5
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	32	100	320	460
Pour Point, °C, ASTM D97	-12	-12	-9	-6
Rust Characteristics, Procedure B, ASTM D665	PASS	PASS	PASS	PASS
Viscosity Index, ASTM D2270	110	95	100	100

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com
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