

Mobil SHC 600* Series

Supreme Performance Gear and Bearing Oils

Product Description

Mobil SHC **600*** Series (pronounced "Mobil SHC 600 Star") lubricants are supreme performance gear and bearing oils, recommended for use as a substitute in applications calling for Mobil SHC 600 Series lubricants, and designed to provide outstanding service in terms of equipment protection, oil life and problem-free operation enabling increased customer productivity. These scientifically engineered oils are formulated with synthetic base fluids with an inherently high viscosity index and a unique, proprietary, additive system which enables these products to provide outstanding performance in extreme service applications at high and low temperatures, well beyond the capabilities of mineral oils. These products are resistant to mechanical shear, even in heavily loaded gear and high shear bearing applications.

The base oils used in the Mobil SHC **600*** Series have outstanding response to antioxidant additives resulting in superior resistance to oxidation and sludging, especially at high temperatures. The additive combination used in these oils also provides outstanding resistance to rusting and corrosion, excellent wear protection, demulsibility, foam control and air release properties, as well as multimetal compatibility. The Mobil SHC **600*** Series oils are also compatible with the same seal and other construction materials used in equipment normally lubricated with mineral oils.

The leading edge technology on which Mobil SHC **600*** Series lubricants are based makes these the products of choice for operators of a wide range of equipment. These products can be used in many industrial applications where Mobil SHC 600 series products have been used with great success. They are particularly useful as high temperature problem solvers, and offer a range of other benefits as well.

Features and Benefits

The Mobil SHC brand of lubricants are recognized and appreciated around the world for their innovation and outstanding performance. These scientifically engineered synthetic lubricants, pioneered by our research scientists, symbolize the continuing commitment to using advanced technology to provide outstanding lubricant products.

Extensive laboratory testing supports the outstanding performance of Mobil SHC **600*** Series lubricants. Not least among the benefits, is the potential for efficiency improvements relative to mineral oils. These benefits will be particularly evident in equipment which, by design, cannot avoid low overall efficiency, such as high ratio worm gears.

To resist degradation of the lubricant during high thermal exposure of the oil, our product formulation scientists tested the base oils for Mobil SHC **600*** Series oils for thermal/oxidative resistance. Our formulators chose specific additives to improve upon the inherent benefits of the base oils to provide excellent oil life and deposit control and resistance to thermal/oxidative and chemical degradation. This formulation approach provides low temperature fluidity characteristics unmatched by mineral products and is a key benefit for remote, low ambient temperature applications. The Mobil SHC **600*** Series oils offer the following features and potential benefits:

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Features	Advantages and Potential Benefits
Superb high temperature thermal/oxidation resistance	Extends equipment high temperature operating capability Long oil life, reduced need and costs for oil change outs
High Viscosity Index	Minimizes sludge and deposits for trouble-free operation and long filter life Maintains viscosity and film thickness at high temperatures
High load carrying capability	Outstanding low temperature performance, including start-up Protects equipment and extends life; minimizes unexpected downtime and extends service periods
Balanced additive combination	Provides excellent performance in terms of rust and corrosion prevention, water separability, foam control, air release performance ensuring problem-free operation in a wide range of industrial applications and reduced operating costs

Applications

Mobil SHC 600* Series are compatible with Mobil SHC 600 Series lubricants. Lubrications systems containing Mobil SHC 600 may be topped off or drained and filled with Mobil SHC 600*, consistent with standard oil change practices. Oil analysis parameters used with Mobil SHC 600 Series lubricants may be applied to Mobil SHC 600* Series lubricants as well. Elastomers, sealants, and paints that are compatible with Mobil SHC 600 will be compatible with Mobil SHC 600*.

Mobil SHC 600* Series lubricants are recommended as a substitute for Mobil SHC 600 Series lubricants in a variety of gear and bearing applications where high or low temperatures are encountered or where operating temperatures or bulk oil temperatures are such that conventional lubricants give unsatisfactory life, or where improved efficiency is needed. They are particularly effective in applications where the maintenance costs of component replacement, system cleaning and lubricant changes are high. Specific applications include:

- Filled for life gearboxes, especially high ratio / low-efficiency worm gears
- Remotely located gearboxes, where oil change-out is difficult
- Low temperature applications, such as ski lifts where seasonal oil changes can be avoided
- Mixer roll bearings and roll neck bearings where high temperatures are encountered
- Plastic calendars
- Railroad A/C Traction Drives
- Mobil SHC 625*, 627*, 629* and 630* are suitable for Oil Flooded Rotary Screw Compressors compressing natural gas, field gas gathering, CO₂ and other process gasses used in the natural gas industry

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Typical Properties

Mobil SHC 600* Series	624*	625*(1)	626*	627*	629*
ISO Viscosity Grade	32	46	68	100	150
Viscosity, ASTM D 445					
cSt @ 40° C	32	46	68	100	150
cSt @ 100° C	5.88	7.48	9.9	14.1	19.0
Viscosity Index, ASTM D 2270	129	127	128	144	143
Pour Point, °C, ASTM D 97	-48	-48	-45	-42	-42
Flash Point, °C, ASTM D 92	250	250	250	250	235
Specific Gravity, ASTM D 4052, 15° C/15° C	0.85	0.85	0.86	0.86	0.86
Appearance, visual	Orange	Orange	Orange	Orange	Orange
Rust protection, ASTM D665, Sea Water	Pass	Pass	Pass	Pass	Pass
Water Separability, ASTM D 1401, Min. to 37 ml water @ 54° C	15	10	10	--	--
Water Separability, ASTM D 1401, Min. to 37 ml water @ 82° C	--	--	--	5	10
Copper Corrosion, ASTM D130, 24 hrs @ 121° C	1B	1B	1B	1B	1B
Foam Test, ASTM D 892, Seq I,II,III Tendency / Stability, ml/ml	0/0, 20/0, 30/0	10/0, 10/0, 10/0	10/0, 20/0, 10/0	0/0, 0/0, 0/0	0/0, 0/0, 0/0
FZG scuffing test, DIN 51354 (mod), A/8.3/90, Failure Stage	10	11	11	13	13
(1) 625* is available only in the USA					

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Mobil SHC 600* Series	630*	632*	634*	636*	639*
ISO Viscosity Grade	220	320	460	680	1000
Viscosity, ASTM D 445					
cSt @ 40° C	220	320	460	680	1000
cSt @ 100° C	25.7	33.1	43.4	61.0	77.4
Viscosity Index, ASTM D 2270	148	145	147	157	153
Pour Point, °C, ASTM D 97	-42	-39	-39	-39	-36
Flash Point, °C, ASTM D 92	235	229	238	240	218
Specific Gravity, ASTM D 4052, 15° C/15° C	0.87	0.87	0.87	0.87	0.87
Appearance, visual	Orange	Orange	Orange	Orange	Orange
Rust protection, ASTM D665, Sea Water	Pass	Pass	Pass	Pass	Pass
Water Separability, ASTM D 1401, Min. to 37 ml water @ 54° C	-	-	-	-	-
Water Separability, ASTM D 1401, Min. to 37 ml water @ 82° C	10	10	15	20	25
Copper Corrosion, ASTM D130, 24 hrs @ 121° C	1B	1B	1B	1B	1B
Foam Test, ASTM D 892, Seq I,II,III Tendency / Stability, ml/ml	0/0, 0/0,0/0	0/0,0/0,0/0	0/0, 0/0,0/0	0/0,0/0,0/0	0/0, 0/0, 0/0
FZG scuffing test, DIN 51354 (mod), A/8.3/90, Failure Stage	13+	13+	13+	13+	13+
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Precautions

MOBIL SHC 600* SERIES is manufactured from high quality petroleum base stocks , carefully blended with selected soaps and additives. As with all petroleum products, good personal hygiene and careful handling should always be practiced. Avoid prolonged contact to skin, splashing into the eyes, ingestion or vapour inhalation. High-pressure injection of any grease under the skin can cause serious delayed soft tissue damage and should be treated immediately by a physician. To avoid injection injuries, inspect greasing equipment regularly for worn hoses and fittings. Keep fingers away form the nozzle and ensure the nozzle is firmly in place before discharging the grease. Please refer to our Imperial Oil Material Safety Data Sheet for further information.

Note: This product is not controlled under Canadian WHMIS legislation.

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