

Industrial Situations for Synthetics :

- Extremes of temperature
- Exposure to excessive loads or contaminants
- Excessive shut downs from mechanical problems
- Equipment failure with mineral lubricants
- High energy consumption
- Excessive parts consumption, such as bearings
- Equipment operating above OEM design parameters
- Inaccessible lubrication points

Technical Measurements

Volume

1 US gallon = 3,7854 liters
 1 petroleum barrel (bbl)
 = 42 US Gallon = 158,97 liters

Weight

1 ounce (oz) = 28,3495 g
 1 pound (lb) = 16 oz = 0,45359 kg

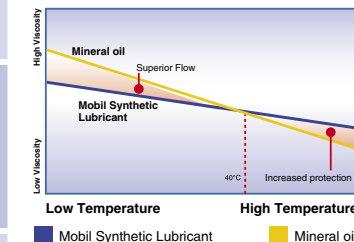
Temperature

°C = 5/9 (°F-32)
 °F = 9/5 (°C+32)



Brand Name	ISO VG	Kinematic Viscosity 40°C 100°C		VI	Pour Point °C	Flash Point °C	Application & Description	Synthetic Benefits
Mobil SHC 522 Mobil SHC 524 Mobil SHC 525 Mobil SHC 526	15 32 46 68	15 32 46 68	3,6 6,4 8,5 11,5	135 144 154 158	-54 -54 -54 -42	210 234 238 216	Synthetic high performance anti-wear hydraulic oils. Very high VI for excellent low and high temperature performance. Maximum anti-wear protection for vane and piston pumps. Wide range of operating temperatures and shear stable.	- Superior Keep Clean properties - Reduces servo valves sticking
Mobil SHC 624 Mobil SHC 626 Mobil SHC 629 Mobil SHC 630 Mobil SHC 632 Mobil SHC 634 Mobil SHC 639	32 68 150 220 320 460 1000	32 70 143 216 326 430 933	6,3 10,9 18,3 25,2 38,6 48,5 79,5	148 146 144 152 169 173 164	-54 -48 -45 -39 -39 -42 -15	240 236 228 235 250 262 270	Synthetic gear and bearing lubricants. Designed for use in hot and cold conditions. Excellent thermal and oxidation stability for long service life. For use in industrial enclosed gear sets and in heavily loaded plain and rolling element bearings.	- Reduced sludge and deposit formation - Minimises effects of micro slip in rolling contact bearings - Reduces overall friction and can increase efficiency in sliding mechanisms
Mobil SHC 824 Mobil SHC 825	32 46	32 44	5,9 7,9	135 148	-54 -45	248 248	Fully synthetic turbine oils for the lubrication of stationary gas turbines. Very good low-temperature and viscosity/temperature properties and excellent oxidation stability. Effective protection against wear. Approved by Siemens TLV 9013 04 and Alstom HTGD 90 117. Mobil SHC 824 meets GEK 107395.	- Reduced deposit formation - Extended intervals between overhauls - Better resistance to heat soakback
Mobilgear SHC XMP 150 Mobilgear SHC XMP 220 Mobilgear SHC XMP 320 Mobilgear SHC XMP 460 Mobilgear SHC XMP 680	150 220 320 460 680	150 220 335 460 680	20,7 27,8 38,3 48,7 65,3	161 163 164 166 168	-48 -45 -39 -36 -30	240 244 242 232 238	Fully synthetic, supreme performance industrial gear oils. Excellent protection for all industrial gear types against micropitting fatigue, particularly in wind turbines and heavily loaded gearboxes with surface-hardened tooth metallurgies. Meets AGMA 9005-D94-S, DIN 51517-3 (CLP) and ISO 12925-1 Type CKD. Approved by Hansen, David Brown, Flender and Jahnelt-Ketsermann.	- Extended oil life and drain intervals - Reduced oil consumption - Ability to operate at both high and low temperatures and also in water-contaminated applications
Mobilgear SHC 1500 Mobilgear SHC 3200 Mobilgear SHC 6800	1500 3200 6800	1500 3023 8031	106 171 357	160 160 180	-18 -9 -6	240 240 240	Very high viscosity, extra heavy-duty synthetic lubricants for low speed, enclosed industrial gears and plain and rolling bearings. Do not contain any solvent.	- Can replace grease in some applications resulting in plant product consolidation - Light colour minimises need for gear cleaning prior to inspections
Mobil Glygoyle 220 Mobil Glygoyle 320 Mobil Glygoyle 460 Mobil Glygoyle 680	220 320 460 680	220 320 460 680	38 55 78 114	225 240 250 265	-33 -33 -33 -33	265 265 265 265	Polyglycol based lubricants. Designed for the lubrication of filled for life gearboxes and heavy-duty worm gears, severe service applications, also in food grade applications. Approved for USDA/ NSF H-1 registered.	- Improved gear efficiency - Lower oil operating temperature - Easy start-up at low temperatures - Micropitting protection
Mobil SHC PM 150 Mobil SHC PM 220 Mobil SHC PM 320 Mobil SHC PM 460	150 220 320 460	158 225 325 465	18,9 25,6 34,7 44,8	131 133 135 137	-39 -36 -33 -27	220 220 220 220	Synthetic, high performance lubricants. For use in demanding industrial paper machine circulatory systems of high output paper machines and of calendar rolls. Separate water effectively and retain their colour characteristics for long periods of operation.	- Improved oil flow and cooling performance - Lower filter replacement costs - Protects gears and bearings in wet environments
Mobil Rarus 827 Mobil Rarus 829	100 150	107 158	10,1 13,2	66 77	-36 -39	270 270	Synthetic, supreme performance air compressor oils. For use for severe duty reciprocating air compressors. Stationary and mobile equipment.	- Reduced potential for fires and explosions in discharge systems - Reduced deposit and sludge formation
Mobil Rarus SHC 1024 Mobil Rarus SHC 1025 Mobil Rarus SHC 1026	32 46 68	32 46 67	5,6 7,2 10,4	127 131 144	-39 -48 -45	245 236 246	Fully synthetic, supreme performance oils for the lubrication of rotary screw and vane air compressors. Reduced deposit formation. Stationary and mobile applications. Long service life.	- Improved safety - Reduced wear of bearings and gears - Wide temperature range capability
Mobil Gargoyle Arctic SHC 224 Mobil Gargoyle Arctic SHC 226 E Mobil Gargoyle Arctic SHC 228 Mobil Gargoyle Arctic SHC 230 Mobil Gargoyle Arctic SHC 234	32 68 100 220 -	29 68 97 220 399	5,6 10,2 13,7 25,0 40,0	132 136 147 149 150	-54 -45 -45 -39 -39	230 266 255 260 280	Fully synthetic, supreme performance lubricants, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia, R-22 and other HCFCs and carbon dioxide. Quality Level USDA H-1.	- Excellent low temperature fluidity - Reduced lacquer and deposit formation for longer filter life and reduced shaft seal leakage - Improved antiwear protection - Reduced oil consumption
Mobil EAL Arctic 22C Mobil EAL Arctic 32 Mobil EAL Arctic 46 Mobil EAL Arctic 68 Mobil EAL Arctic 100	22 32 46 68 100	24 34 49 68 105	4,8 5,8 7,3 8,7 11,6	129 115 115 95 91	-54 -48 -42 -36 -30	235 236 230 230 230	Fully synthetic, high performance Environmental Awareness Lubricants (EAL) for refrigeration compressors using ozone-friendly HFC refrigerants. Based on synthesised polyolesters (POEs). Miscible with HFC refrigerants. Suitable for household and commercial refrigeration and air conditioning systems in shopping malls and hotels and low temperature transportation. Mobil EAL Arctic 22CC is for Copeland compressors.	- Improved evaporator cleanliness - Reduced compressor wear - Well defined miscibility assures proper oil return
Mobil Pyrolube 830	-	180	20,4	132	-45	270	Synthetic, PAO/ester mix based, high temperature lubricant for conveyor chains (up to 230°C). Excellent oxidation stability and reduced deposit formation.	- Resists evaporation - No objectionable smells or emissions
Mobil Pegasus 1	15W-40	94	13,1	137	-48	238	TBN = 6,5. Ash = 0,48% Synthetic, high performance gas engine oil. For most demanding naturally aspirated and turbocharged stoichiometric and lean-burn gas engines. Approved by Waukesha, Deutz MWM, MAN and Wartsila.	- Easy start-up at low temperatures - Reduced deposit formation

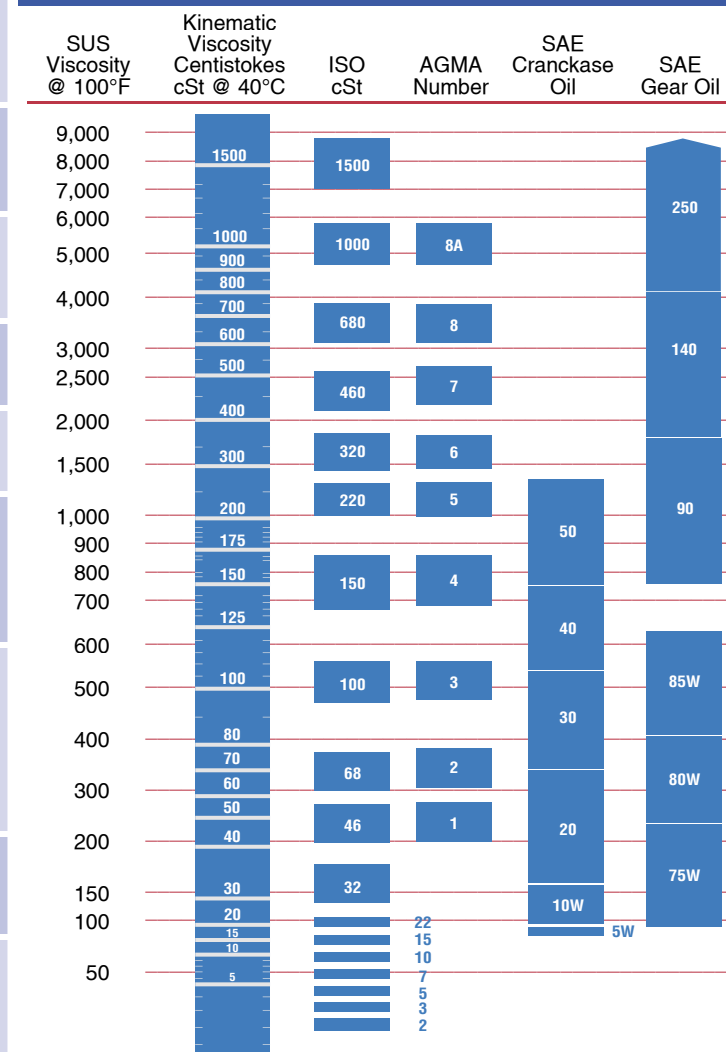
Viscosity change with temperature Mobil synthetic lubricant vs mineral oil.







































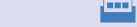



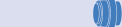











Due to continual product research and development, the information contained in this brochure is subject to change without notification. The data are intended to be a guide only and are not manufacturing specifications and no claims can be made based on them. This catalogue reflects regional ExxonMobil products. Hence, some products may not be available locally.

Lubricant Viscosity Grade Comparisons

For Use as a General Guide Only. Viscosities are based on a 95 VI Oil.



Grease		Colour	Thickener	Base Oil	Base Oil Viscosity cSt at 40°C	NLGI	Operating Temp (°C)		Load Range		Typical Applications
							Min	Max (*)	Properties	Load	
	Mobilith SHC 007		Lithium Complex	SHC	460	00	-40	160	EP	Heavy	Slow speed enclosed gears, gear boxes. Long life.
	Mobilith SHC 100		Lithium Complex	SHC	100	2	-40	180	AW	Moderate	Electric motors, fans and high speed bearings.
	Mobilith SHC 220		Lithium Complex	SHC	220	2	-40	180	EP	Moderate	Automotive and industrial multi purpose, heavy duty.
	Mobilith SHC 460		Lithium Complex	SHC	460	1.5	-30	180	EP	Heavy	Slow speeds & heavy loads. Excellent resistance to water spray-off.
	Mobilith SHC 1500		Lithium Complex	SHC	1500	1	-20	180	EP	Heavy	Slow speeds, very heavily loaded bearings operating at high temp.
	Mobilith SHC PM 220		Lithium Complex	SHC	220	1.5	-30	180	EP	Moderate	Severe paper machine applications, bearings with higher speed.
	Mobilith SHC PM 460		Lithium Complex	SHC	460	1.5	-30	180	EP	Heavy	Severe paper machine applications, bearings with lower speed and heavy load.
	Mobiltemp SHC 32		Clay	SHC	32	2	-50	180	AW	Moderate	High speed rolling element spindle bearing. Machine tools.
	Mobiltemp SHC 100		Clay	SHC	100	1	-50	180	AW	Moderate	High speed bearing and electric motors.
	Mobiltemp SHC 460 Special		Clay	SHC	460	1	-30	180	EP, M	Very Heavy	Plain bearing operating under arduous conditions. Glass ovens.
	Mobil Polyrex EM		Polyurea	Mineral	115	2	-15	160		Light	Recommended for electric motor bearings and sealed-for-life bearings. Also for low noise sensitive environments.
	Mobilgrease XHP 222		Lithium Complex	Mineral	220	2	20	150	EP	Heavy	Multipurpose automotive and industrial applications.
	Mobilgrease XHP 322 Special		Lithium Complex	Mineral	320	2	-10	150	EP, M	Very Heavy	Heavy loaded bearing. Fifth wheel. Open gears.
	Mobilgrease XHP 461		Lithium Complex	Mineral	460	1	-10	150	EP	Heavy	Centralised system in steel industry. Construction and mining.
	Mobilux EP 004		Lithium	Mineral	150	00	-25	120	EP	Heavy	Enclosed gears and bearing in leaking gear cases.
	Mobilux EP 0		Lithium	Mineral	150	0	-20	130	EP	Heavy	Plain and rolling bearings of very soft consistency.
	Mobilux EP 1		Lithium	Mineral	150	1	-20	130	EP	Heavy	Heavily loaded plain and roller bearings. Centralised systems.
	Mobilux EP 2		Lithium	Mineral	150	2	-20	130	EP	Heavy	Heavily loaded plain and roller bearings.
	Mobilux EP 3		Lithium	Mineral	150	3	-10	130	EP	Heavy	Heavily loaded plain and roller bearings of stiffer consistency.
	Mobilgrease Special		Lithium	Mineral	150	2	-20	130	EP, M	Heavy	Wheel bearing & chassis components.
	Mobilux EP 111		Lithium	Mineral	1000	1	-10	120	EP	Heavy	Gear, grid or spring, and chain heavily loaded couplings.
	Chassis Grease LBZ		Lithium	Mineral	42	000	-25	90	AW	Light	Automatic chassis lubrication. Daimler Benz pg 264.
	Mobiltemp 78		Clay	Alkylated	460	1	-10	170	EP, M	Moderate	Low speed plain and roller bearings at high temperature.
	Mobilgrease FM 221		Aluminium Complex	Mineral	220	1	-25	170	AW	Moderate	Multipurpose grease for food processing industry. Also for central greasing systems.
	Mobilgrease FM 222		Aluminium Complex	Mineral	220	2	-25	170	AW	Moderate	Multipurpose grease for food processing industry.
	Mobilgrease OGL 007		Lithium	Mineral	460	00	-20	120	EP	Heavy	Large, slow to medium speed, heavily loaded open gear lubrication.

SHC = Synthetic Hydrocarbon

AW=Anti Wear, EP=Extreme Pressure, M=Molybdenum Disulphide, G=Graphite

*depending on re-lubrication intervals



Grease Classification

The consistency of the grease is determined by the type and amount of thickener present and this is described by the National Lubricating Grease Institute (NLGI) classification. This is an arbitrary scale based on the depth of penetration of a standard cone into a sample of grease under prescribed conditions of weight, time and temperature. The higher the penetration number, the softer grease.

Grade NLGI	Penetration [0,1mm] 25°C (after 60-stroke worked)	Appearance
000	445 - 475	Very fluid
00	400 - 430	Semi-fluid
0	355 - 385	Soft
1	310 - 340	Semi-soft
2	265 - 295	Multi-purpose
3	220 - 250	Semi-hard
4	175 - 205	Hard
5	130 - 160	Very Hard
6	85 - 115	Block

Grease Compatibility

Incompatibility of different grease thickener types can present a problem. The following chart is a general guide only on consistency. Overall compatibility should always be checked using laboratory tests. Our engineers can further advise you on a case by case basis.

	Calcium	Calcium Complex	Clay	Lithium	Lithium Complex
Calcium	Yes	No	No	No	No
Calcium complex	No	Yes	No	No	No
Clay	No	No	Yes	No	no
Lithium	No	No	No	Yes	Yes
Lithium Complex	No	No	No	Yes	Yes

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