



# Mobil™ product summary industrial lubricants

**Mobil™**

Performance by **ExxonMobil**



## Foreword

This product summary guide (Status: June 2016) describes the Mobil industrial lubricants offered by ExxonMobil.

Each branded product or series has a brief description of its key features, typical applications, major OEM and EB approvals and some general data on important physical characteristics.

Mobil products are

- carefully formulated to meet today's demanding applications
- rigorously tested and approved to meet many major OEM and EB requirements
- manufactured to high standards and global consistency through the ExxonMobil Quality Integrity Management System
- widely available through local ExxonMobil lubricants distributors

For additional information regarding these products, please refer to specific Product Data Sheets and Material Safety Data Sheets. These may be obtained at [www.exxonmobil.com](http://www.exxonmobil.com) or by calling your local ExxonMobil representative or distributor.

For more detailed technical information on these products, please contact the Mobil Technical Helpdesk at [TechDeskEurope@exxonmobil.com](mailto:TechDeskEurope@exxonmobil.com)

Due to continued product research and development, the information contained in this guide is subject to change without notification. The data is intended to be a guide only, and are not manufacturing specifications. Not all products are available in all markets.

ExxonMobil cannot accept any responsibility or liability whatsoever for the correctness, completeness and accuracy of the information presented in this brochure.

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](http://www.exxonmobil.com)

**Some products may not be available in your region.**

**Visit the local distributor website or contact them for details.**

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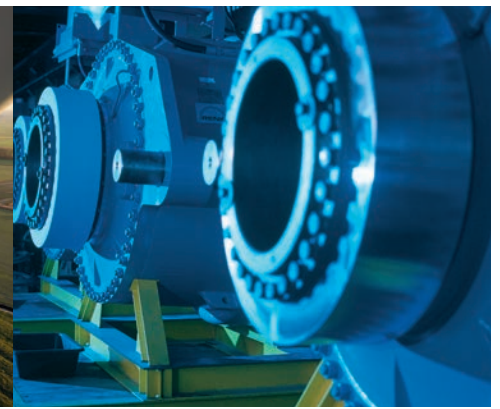
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## Turbine and Circulation Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC 824</b>	32	31.5	5.9	135	0.83	-54	248	Siemens TLV 9013 04 & 05 Alstom HTGD 90117 MHI MS04-MA-CL003	Solar ES9-224 Class I GE GEK 32568G	GE GEK 101941A GE GEK 28143B
	Synthetic high-performance turbine oil for land-based gas turbines. Offers outstanding high thermal and oxidative stability and deposit control as well as excellent low temperature fluidity. Naturally high Viscosity Index, excellent antiwear performance.									
<b>Mobil SHC 825</b>	46	43.9	7.9	145	0.83	-45	248	Siemens TLV 9013 04 & 05 Alstom HTGD 90117	Solar ES9-224 Class I	
	Synthetic high-performance turbine oil for land-based gas turbines. Offers outstanding high thermal and oxidative stability and deposit control as well as excellent low temperature fluidity. Naturally high Viscosity Index, excellent antiwear performance.									
<b>Mobil DTE 932 GT</b>	32	31.5	6.1	141	0.84	-18	240		GE GEK 32568G	GE GEK 101941A GE GEK 28143 B
	Next generation high-performance turbine oil designed for use in large frame turbines under severe operating conditions. Long oil life in combination with industry leading “keep clean” performance. Non-zinc antiwear system to meet the load carrying requirements of geared turbines (FZG = 10). Specifically formulated for General Electric Frame 3, 5, 6, 7 and 9 turbines with common bearing and hydraulic oil reservoir, where varnish control is most needed.									
<b>Mobil DTE 832</b>	32	29.6	5.4	110	0.86	-30	224	Siemens TLV 9013 04 Siemens TLV 9013 05 Alstom Power HTGD 90 117	Siemens Industrial Turbo Machinery: MAT 812101 MAT 812106 MAT 812108 GE GEK 28143A GE GEK 32568E GE GEK 32568G GE GEK 101941A GE GEK 107395a GE GEK 46506D Siemens Westinghouse PD-55125Z3 Solar ES 9-224, Class II JIS K-2213 Type 2 with additives (2006) DIN 51515-1: 2010-02 DIN 51515-2: 2010-02	GE GEK 28143B, GE GEK 32568C
	Very high-quality turbine oil for use in steam turbines, gas turbines and combined gas turbines (CCGT) applications. Non-zinc antiwear system to meet the load carrying requirements of geared turbines (FZG = 9). Made from hydrotreated base stocks.									
<b>Mobil DTE 846</b>	46	42.4	6.2	106	0.87	-30	244	Siemens TLV 9013 04 Siemens TLV 9013 05 Alstom Power HTGD 90 117	Siemens Industrial Turbo Machinery: MAT 812102 MAT 812107 MAT 812109 Solar ES 9-224, Class II JIS K-2213 Type 2 w/Additives, 2006 DIN 51515-1: 2010-02 DIN 51515-2: 2010-02	GE GEK 28143A
	Very high-quality turbine oil for use in steam turbines, gas turbines and combined gas turbines (CCGT) applications. Non-zinc antiwear system to meet the load carrying requirements of geared turbines (FZG = 9). Made from hydrotreated base stocks.									



Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil DTE 732</b>	32	30	5.5	117	0.85	-30	228	Siemens TLV 9013 04 Siemens TLV 9013 05 Alstom Power HTGD 90 117 LMZ letter No 510-019/108n	Siemens Industrial Turbo Machinery: MAT 812101 Siemens Westinghouse PD-55125Z3 GE GEK 27070 GE GEK 28143A GE GEK 32568G GE GEK 46506D JIS K-2213 Type 2 with additives DIN 51515-1: 2010-02 DIN 51515-2: 2010-02 ASTM 4304 Rev A Type I ASTM 4304 Rev A Type III China National Std GB 11120-89 L-TSA	ISO 8068 L-TGB 2006 ISO 8068 L-TGSB 2006
	Premium-performance zinc free turbine lubricant specifically designed for use in gas and steam turbine applications. Based on very high-quality hydrotreated base stocks. Outstanding thermal and oxidation stability.									
<b>Mobil DTE 746</b>	46	44	6.8	113	0.86	-30	230	Siemens TLV 9013 04 Siemens TLV 9013 05 Alstom Power HTGD 90 117	Siemens Industrial Turbo Machinery: MAT 812102 GE GEK 28143A JIS K-2213 Type 2 with additives DIN 51515-1: 2010-02 DIN 51515-2: 2010-02 ASTM 4304 Rev A Type I ASTM 4304 Rev A Type III China National Std GB 11120-89 L-TSA	ISO 8068 L-TGB 2006 ISO 8068 L-TGSB 2006
	Premium-performance zinc free turbine lubricant specifically designed for use in gas and steam turbine applications. Based on very high-quality hydrotreated base stocks. Outstanding thermal and oxidation stability.									
<b>Mobil DTE 732 M</b>	32	31.3	5.8	131		-15	233	MS04-MA-CL001 MS04-MA-CL002 MS04-MA-CL005	JIS K-2213 Typ 2 (2006)	
	Next generation high-performance turbine oil designed for use in Mitsubishi Heavy Industry (MHI) non-gear Single Shaft Heavy-duty Gas & Steam Turbines and Multi Shaft Gas Turbines. Meets MHI's requirements for long life – high temperature turbine applications, MS04-MA-CL005, through high-quality base oils and additive system designed to provide long oil life as well as the requirements of MS04-MA-CL001 and CL002.									
<b>Mobil DTE Oil Light</b>	32	31	5.5	102	0.85	-18	218		DIN 51515-1: 2010-02 DIN 51517-2: 2009-06 JIS K-2213 Typ 2 mit Additiven (1983)	GE GEK 270270 GE GEK 28143A GE GEK 46506D
	Premium-performance circulation oil for steam and hydroturbine sets. Also for continuous lubrication of plain and antifriction bearings. High thermal stability and rapid separation from water.									
<b>Mobil DTE Oil Medium</b>	46	44.5	6.9	98	0.86	-15	221		DIN 51515-1: 2010-02 DIN 51517-2: 2009-06 JIS K-2214 Type 2 with additives (1983)	GE GEK 28143A
	Premium-performance circulation oil for steam and hydroturbine sets. Also for continuous lubrication of plain and antifriction bearings. High thermal stability and rapid separation from water.									











## Turbine and Circulation Oils

Brand name	ISO VG	Kinematic Viscosity <i>mm<sup>2</sup>/s</i>		Visco- sity Index	Density at 15°C <i>g/cm<sup>3</sup></i>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil DTE Oil Heavy Medium</b>	68	65.1	8.7	95	0.87	-15	223	ABB Turbo HZTL 90617 ABB Turbo HZTL 90572	DIN 51515-1: 2010-02 DIN 51517-2: 2009-06 JIS K-2214 Type 2 with additives (1983)	ABB Turbo HZTL 90617 ABB Turbo HZTL 90572
	Premium-performance circulation oil for steam and hydroturbine sets. Also for continuous lubrication of plain and antifriction bearings. High thermal stability and rapid separation from water.									
<b>Mobil DTE Oil Heavy</b>	100	95.1	10.9	92	0.88	-15	237		DIN 51515-1: 2010-02 DIN 51517-2: 2009-06 DIN 51524-1: 2006-09	
	Premium-performance circulation oil for steam and hydroturbine sets. Also for continuous lubrication of plain and antifriction bearings. High thermal stability and rapid separation from water.									
<b>Teresstic T 32</b>	32	32	5.4	100	0.86	-30	222	Siemens TLV 9013 04 Alstom Power HTGD 90 117	Siemens Industrial Turbo Machinery MAT 812101 China National Standard GB 11120-89 L-TSA GE GEK 46506D DIN 51515-1: 2010-02 JIS K-2213 Type 2 with additives (2006)	GE GEK 270270 GE GEK 28143A
	High-quality turbine and circulation system oil. Designed for steam and light duty stationary gas turbines. Also land-based and marine steam and hydro-turbines.									
<b>Teresstic T 46</b>	46	46	6.8	100	0.87	-30	218	Siemens TLV 9013 04, Alstom Power HTGD 90 117	Siemens Industrial Turbo Machinery MAT 812102 China National Standard GB 11120-89 L-TSA DIN 51515-1: 2010-02 JIS K-2213 Type 2 with additives (2006)	GE GEK 28143A
	High-quality turbine and circulation system oil. Designed for steam and light duty stationary gas turbines. Also land-based and marine steam and hydro-turbines.									
<b>Teresstic T 68</b>	68	68	8.5	95	0.87	-30	220		China National Standard GB 11120-89 L-TSA DIN 51515-1: 2010-02 JIS K-2213 Type 2 with additives (2006)	
	High-quality turbine and circulation system oil. Designed for steam and light duty stationary gas turbines. Also land-based and marine steam and hydro-turbines.									






Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC 624</b> 	32	32	6.3	148	0.85	-57	236	SEW Eurodrive: SEW IG CLP HC 32, SEW SG CLP HC 32	AGMA 9005 EO2-EP ISO 12925-1 CKB	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 626</b> 	68	68	11.6	165	0.86	-51	225	SEW Eurodrive: SEW IG CLP HC 68, SEW SG CLP HC 68 Fives Cincinnati P-63 & P-80	AGMA 9005 EO2-EP ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 627</b> 	100	100	15.3	162	0.86	-45	235	Fives Cincinant P-76	AGMA 9005 E02 -EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 629</b> 	150	150	21.1	166	0.86	-42	220	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A36. SEW Eurodrive: SEW IG CLP HC 150 & SEW SG CLP HC 150 Fives Cincinant P-77	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 630</b> 	220	220	28.5	169	0.87	-42	220	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A35. DESCH ZG 30 gear unit SEW Eurodrive: SEW IG CLP HC 220 & SEW SG CLP HC 220.	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 632</b> 	320	320	38.5	172	0.87	-42	225	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A34. SEW Eurodrive: SEW IG CLP HC 320.	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										

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## Circulation Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC 634</b> 	460	460	50.7	174	0.87	-39	228	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A33. SEW Eurodrive: SEW IG CLP HC 460 & SEW SG CLP HC 460 GE Transportation Traction Motor GED50E32 AC	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 636</b> 	680	680	69	181	0.87	-39	225	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A32. SEW Eurodrive: SEW IG CLP HC 680. Fives Cincinnati P-34	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1:1996 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil SHC 639</b> 	1000	1000	98.8	184	0.87	-33	222	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A31. SEW Eurodrive: SEW IG CLP HC 1000, Fives Cincinnati P-78	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1:1996 CKD	
Synthetic gear and bearing lubricant. 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 antifriction bearings.										
<b>Mobil Vacuoline 128</b>	150	150	14.8	96	0.89	-9	280		SMS SIEMAG-MORGOIL Lubricant Specification Advanced Lubricant, SN 180 Part 4: 2009-07, SMS SIEMAG MORGOIL-Lubricant Spec Std Lubricant SN 180 Part 3: 2009-07, DIN 51517-2: 2009-06	
Extra high-quality circulation oil for the lubrication of plain bearings, operating with heavy water contamination. Suitable for use in Morgoil rolling mills. Outstanding demulsibility.										
<b>Mobil Vacuoline 133</b>	220	220	18.8	95	0.89	-6	288		SMS SIEMAG-MORGOIL Lubricant Specification Advanced Lubricant, SN 180 Part 4: 2009-07, SMS SIEMAG MORGOIL-Lubricant Spec Std Lubricant SN 180 Part 3: 2009-07, DIN 51517-2: 2009-06	
Extra high-quality circulation oil for the lubrication of plain bearings, operating with heavy water contamination. Suitable for use in Morgoil rolling mills. Outstanding demulsibility.										






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Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Vacuoline 137</b>	320	320	23.9	95	0.9	-9	286		SMS SIEMAG-MORGOL Lubricant Specification Advanced Lubricant, SN 180 Part 4: 2009-07, SMS SIEMAG MORGOL Lubricant Spec Std Lubricant SN 180 Part 3: 2009-07, DIN 51517-2: 2009-06	
	Extra high-quality circulation oil for the lubrication of plain bearings, operating with heavy water contamination. Suitable for use in Morgoil rolling mills. Outstanding demulsibility.									
<b>Mobil Vacuoline 146</b>	460	460	30.1	95	0.9	-6	296		SMS SIEMAG-MORGOL Lubricant Specification Advanced Lubricant, SN 180 Part 4: 2009-07, SMS SIEMAG-MORGOL Lubricant Specification Advanced Lubricant, SN 180 Part 3: 2009-07, DIN 51517-2: 2009-06	
	Extra high-quality circulation oil for the lubrication of plain bearings, operating with heavy water contamination. Suitable for use in Morgoil rolling mills. Outstanding demulsibility.									
<b>Mobil Vacuoline 148</b>	680	680	36.7	91	0.91	-6	318		SMS SIEMAG-MORGOL Lubricant Specification Advanced Lubricant, SN 180 Part 4: 2009-07, SMS SIEMAG-MORGOL Lubricant Specification Advanced Lubricant, SN 180 Part 3: 2009-07	
	Extra high-quality circulation oil for the lubrication of plain bearings, operating with heavy water contamination. Suitable for use in Morgoil rolling mills. Outstanding demulsibility.									
<b>Mobil Vacuoline 525</b>		89	10.7	99	0.88	-24	264	DANIELI Type 21-0.002117.R BGV No Twist Stand Block-TMB/TFS Rev 14	MORGOL „No twist rod mill“ Lubricants Specification	
	Extra high-performance heavy-duty circulation oil requiring antiwear properties requiring of FZG up to 12 fail load stage. Meets the critical requirements of No-Twist Rod Mills by Morgan and Danielli. Has excellent water demulsibility. Suitable for gears and bearings.									
<b>Mobil Vacuoline 528</b>	150	146	14.4	96	0.89	-21	272			
	Extra high-performance heavy-duty circulation oil requiring antiwear properties requiring of FZG up to 12 fail load stage. Has excellent water demulsibility. Suitable for gears and bearings.									
<b>Mobil Vacuoline 533</b>	220	215	18.8	96	0.89	-15	284			
	Extra high-performance heavy-duty circulation oil requiring antiwear properties requiring of FZG up to 12 fail load stage. Has excellent water demulsibility. Suitable for gears and bearings.									
<b>Mobil Vacuoline 537</b>	320	309	24.4	96	0.89	-12	288			
	Extra high-performance heavy-duty circulation oil requiring antiwear properties requiring of FZG up to 12 fail load stage. Has excellent water demulsibility. Suitable for gears and bearings.									
<b>Mobil Vacuoline 546</b>	460	453	29.4	95	0.9	-12	286			
	Extra high-performance heavy-duty circulation oil requiring antiwear properties requiring of FZG up to 12 fail load stage. Has excellent water demulsibility. Suitable for gears and bearings.									



## Industrial Gear Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Gear 150</b> 	150	150	22.2	176	0.86	-54	233	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A36, SEW Eurodrive SEW IG CLP HC 150	AGMA 9005-E02-EP, DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD, ISO 12925-1 Typ CKT	
Supreme-performance, synthetic industrial gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. Recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears.										
<b>Mobil SHC Gear 220</b> 	220	220	30.4	180	0.86	-45	233	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A35, SEW Eurodrive SEW IG CLP HC 220	AGMA 9005-E02 -EP DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD, ISO 12925-1 Typ CKT	
Supreme-performance, synthetic industrial gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. Recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears.										
<b>Mobil SHC Gear 320</b> 	320	320	40.6	181	0.86	-48	233	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A34, SEW Eurodrive SEW IG CLP HC 320	AGMA 9005-E02 - EP DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD	
Supreme-performance, synthetic industrial gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. Recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears.										
<b>Mobil SHC Gear 460</b> 	460	460	54.1	184	0.86	-48	234	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A33, SEW Eurodrive SEW IG CLP HC 460	AGMA 9005-E02 EP DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD	
Supreme-performance, synthetic industrial gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. Recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears.										
<b>Mobil SHC Gear 680</b> 	680	680	75.5	192	0.86	-42	234	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A32, SEW Eurodrive SEW IG CLP HC 680	AGMA 9005-E02-EP DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD	
Supreme-performance, synthetic industrial gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. Recommended for enclosed industrial gear drives including steel-on-steel spur, helical, and bevel gears.										
<b>Mobil SHC Gear 3200</b>		3200	183	165	0.89	-9	230		General Electric Transportation GED50E25C Traction Motor	
Very high viscosity, extra heavy-duty synthetic lubricant for low speed, enclosed industrial gears and plain and antifriction bearings. Does not contain any solvent.										
<b>Mobil SHC Gear 6800</b>		8200	365	180	0.9	-6	230		General Electric Transportation GED50E25B DC Traction Motor	
Very high viscosity, extra heavy-duty synthetic lubricant for low speed, enclosed industrial gears and plain and antifriction bearings. Does not contain any solvent.										

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Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Gear 22M</b>		22000	700	180	0.89	6	240			
Ultra high viscosity, extra heavy-duty synthetic lubricant for low speed, enclosed industrial gears and plain and antifriction bearings. Solvent free										
<b>Mobilgear XMP 150</b>	150	150	14.6	96	0.9	-24	258	Hansen	ISO L-CKC, (ISO 12925-1, 1996)	
Extra high-performance industrial gear oil for extreme conditions. Recommended for heavily loaded gearboxes with surface-hardened tooth metallurgies subject to micropitting.										
<b>Mobilgear XMP 220</b>	220	220	18.8	96	0.9	-24	272	Hansen Jahnel-Kestermann	AGMA 9005-EO2 EP, ISO L-CKC, (ISO 12925-1, 1996)	
Extra high-performance industrial gear oil for extreme conditions. Recommended for heavily loaded gearboxes with surface-hardened tooth metallurgies subject to micropitting.										
<b>Mobilgear XMP 320</b>	320	320	24.1	96	0.9	-18	268	Hansen Jahnel-Kestermann	AGMA 9005-EO2 EP, ISO L-CKC, (ISO 12925-1, 1996)	
Extra high-performance industrial gear oil for extreme conditions. Recommended for heavily loaded gearboxes with surface-hardened tooth metallurgies subject to micropitting.										
<b>Mobilgear XMP 460</b>	460	460	30.6	96	0.91	-12	270	Hansen Jahnel-Kestermann	AGMA 9005-EO2 EP, ISO L-CKC, (ISO 12925-1, 1996)	
Extra high-performance industrial gear oil for extreme conditions. Recommended for heavily loaded gearboxes with surface-hardened tooth metallurgies subject to micropitting.										
<b>Mobilgear 600 XP 68</b>	68	68	8.8	97	0.88	-27	230		AGMA 9005-E02 2 EP, DIN 51517-3: 2009-06, ISO 12925-1 Typ CKD 68	
Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.										
<b>Mobilgear 600 XP 100</b>	100	100	11.2	97	0.88	-24	230	SIEMENS AG Flender gear units, T 7300, Table A-a, Flender Code No. A17, Müller- Weingarten DT 55 005 CLP 100 RENK B19828 300	AGMA 9005-E02 3 EP, DIN 51517-3: 2009-06, ISO 12925-1 Typ CKD 100	
Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.										
<b>Mobilgear 600 XP 150</b>	150	150	14.7	97	0.89	-24	230	SIEMENS AG Flender gear units, T 7300, Table A-a, Flender Code No. A16, SIEMENS AG Flender gear units, T 7300, Table E-am, Flender Code No. E76, Müller- Weingarten DT 55 005 CLP 150 RENK B19828 400	AGMA 9005-E02 4 EP, DIN 51517-3: 2009-06, ISO 12925-1 Typ CKD 150	
Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.										



# Industrial Gear Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgear 600 XP 220</b>	220	220	19	97	0.89	-18	240	SIEMENS AG Flender gear units, T 7300, Table A-a, Flender Code No. A15, Müller- Weingarten DT 55 005 CLP 220 RENK B19828 600	AGMA 9005-E02 5 EP, DIN 51517-3: 2009-06, ISO 12925-1 Typ CKD 220	
	Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.									
<b>Mobilgear 600 XP 320</b>	320	320	24.1	96	0.9	-15	240	SIEMENS AG Flender gear units, T 7300, Table A-a, Flender Code No. A14, Müller- Weingarten DT 55 005 CLP 320	AGMA 9005-E02 6 EP, DIN 51517-3: 2009-06, ISO 12925-1 Typ CKD 320	
	Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.									
<b>Mobilgear 600 XP 460</b>	460	460	30.6	95	0.9	-15	240	SIEMENS AG Flender gear units, T 7300, Table A-a, Flender Code No. A13, Müller- Weingarten DT 55 005 CLP 460	AGMA 9005-E02 7 EP, DIN 51517-3: 2009-06, ISO 12925-1 Typ CKC 460	
	Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.									
<b>Mobilgear 600 XP 680</b>	680	680	39.2	95	0.91	-9	285	SIEMENS AG Flender gear units, T 7300, Table A-a, Flender Code No. A12	DIN 51517-3: 2009-06, ISO 12925-1 Typ CKC 680	
	Extra high-performance gear oil having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems.									
<b>Mobil Glygoyle 11</b>		85	11.5	125	1.01 (at 20°C)	-45	226			
	High-performance, poly-alkylene-glycol (PAG) based lubricant. For use in extreme temperature gear, bearing and circulation applications. Not miscible with mineral oils. Lubricant does have limitations with respect to compatibility with seal and coating materials, some varieties of light metal alloys and other lubricants. Before applying, contact the original equipment manufacturer for specific advice on the application.									
<b>Mobil Glygoyle 22</b>		177	25.1	175	1.01 (at 20°C)	-41	229			
	High-performance, poly-alkylene-glycol (PAG) based lubricant. For use in extreme temperature gear, bearing and circulation applications. Not miscible with mineral oils. Lubricant does have limitations with respect to compatibility with seal and coating materials, some varieties of light metal alloys and other lubricants. Before applying, contact the original equipment manufacturer for specific advice on the application.									
<b>Mobil Glygoyle 30</b>		224	30.9	180	1.01 (at 20°C)	-41	221			
	High-performance, poly-alkylene-glycol (PAG) based lubricant. For use in extreme temperature gear, bearing and circulation applications. Not miscible with mineral oils. Lubricant does have limitations with respect to compatibility with seal and coating materials, some varieties of light metal alloys and other lubricants. Before applying, contact the original equipment manufacturer for specific advice on the application.									
<b>Mobil Glygoyle 220</b>	220	220	38.1	225	1.08	-33	265	NSF-H1-Registration Number 136642, Fives Cincinnati P-39	FDA 21 CFR 178.3570	
	Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricants are not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and rolling contact bearings in wide variety of applications.									







Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Glygoyle 320</b>	320	320	55.2	240	1.08	-33	265	NSF-H1-Registration Number 136643	FDA 21 CFR 178.3570	
	Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricant not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and antifriction bearings in wide variety of applications.									
<b>Mobil Glygoyle 460</b>	460	460	77.2	250	1.08	-33	265	NSF-H1-Registration Number 136467, Fives Cincinnati P-39	FDA 21 CFR 178.3570	
	Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricant not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and antifriction bearings in wide variety of applications.									
<b>Mobil Glygoyle 680</b>	680	680	112.4	265	1.08	-33	265	NSF-H1-Registration Number 136468	FDA 21 CFR 178.3570	
	Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricant not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and antifriction bearings in wide variety of applications.									



## Slideway Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Vactra Oil No. 1</b>	32	32				-30	216	Fives Cincinnati P-53		
	Premium-quality lubricant for the lubrication of horizontal slideways of modern machine tools. Outstanding stick-slip performance and rapid separation from water based cutting fluids.									
<b>Mobil Vactra Oil No. 2</b>	68	68				-18	228	Fives Cincinnati P-47		
	Premium-quality lubricant for the lubrication of horizontal slideways of modern machine tools. Outstanding stick-slip performance and rapid separation from water based cutting fluids.									
<b>Mobil Vactra Oil No. 3</b>	150	156				-6	248			
	Premium-quality lubricant for the lubrication of horizontal and vertical slideways of modern machine tools. Outstanding stick-slip performance and rapid separation from water based cutting fluids.									
<b>Mobil Vactra Oil No. 4</b>	220	221				-3	240	Fives Cincinnati P-50		
	Premium-quality lubricant for the lubrication of horizontal and vertical slideways of modern machine tools. Outstanding stick-slip performance and rapid separation from water based cutting fluids.									






Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC 524</b>	32	32	6.4	144	0.85	-56	234	Denison HF-0, Denison HF-1, Denison HF-2		
	Zinc-containing synthetic high-performance antiwear hydraulic oil. Very high VI for excellent low and high temperature performance. Maximum antiwear protection for vane and piston pumps. Wide range of operating temperatures and shear stable.									
<b>Mobil SHC 525</b>	46	46	8.5	154	0.85	-54	238	Denison HF-0, Denison HF-1, Denison HF-2		
	Zinc-containing synthetic high-performance antiwear hydraulic oil. Very high VI for excellent low and high temperature performance. Maximum antiwear protection for vane and piston pumps. Wide range of operating temperatures and shear stable.									
<b>Mobil SHC 526</b>	68	68	11.5	158	0.85	-53	240	Denison HF-0, Denison HF-1, Denison HF-2		
	Zinc-containing synthetic high-performance antiwear hydraulic oil. Very high VI for excellent low and high temperature performance. Maximum antiwear protection for vane and piston pumps. Wide range of operating temperatures and shear stable.									
<b>Mobil DTE 10 Excel 15</b> 	15	15.8	4.1	168	0.84	-54	182		DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV	
	Zinc- and silikon-free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.									
<b>Mobil DTE 10 Excel 22</b> 	22	22.4	5.07	164	0.84	-54	224		DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV	
	Zinc free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.									
<b>Mobil DTE 10 Excel 32</b> 	32	32.7	6.6	164	0.85	-54	250	Denison HF-O, Eaton Vickers 694 (encompasses former I-286-S, M-2950-S or M-2952-S) Denison HF-2	DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV, JCMAS HK, Bosch-Rexroth RE 90220-1	
	Zinc free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.									
<b>Mobil DTE 10 Excel 46</b> 	46	45.6	8.5	164	0.85	-45	232	Arburg Hydraulic fluid Denison HF-O, Eaton Vickers 694 (encompasses former I-286-S, M-2950-S or M-2952-S), Fives Cincinnati P-70	DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV, JCMAS HK VG46W (JCMAS P 041:2004), Bosch-Rexroth RE 90220-1, Krauss-Maffei hydraulic Oil	
	Zinc- and silikon-free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.									

\* Energy efficiency relates solely to the fluid performance when compared to ExxonMobil's standard hydraulic fluids. The technology used allows up to 6 % increase in hydraulic pump efficiency compared to Mobil DTE 20 series when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with all applicable industry standards and protocols. In case of queries, please consult TechDeskEurope@exxonmobil.com








# Hydraulic Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil DTE 10 Excel 68</b> 	68	68.4	11.2	156	0.86	-39	240	Denison HF-O, Eaton Vickers 694 (encompasses former I-286-S, M-2950-S or M-2952-S), Fives Cincinnati P-69 STROMAG AG TM-000 327	DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV, Bosch-Rexroth RE 90220-1	
Zinc free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.										
<b>Mobil DTE 10 Excel 100</b> 	100	99.8	13	127	0.88	-33	258		DIN 51524-2: 2006-09	
Zinc free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.										
<b>Mobil DTE 10 Excel 150</b> 	150	156	17.2	120	0.88	-30	256	Ortlinghaus-Werke GmbH on 9.2.10	DIN 51524-2: 2006-09	
Zinc- and silikon-free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.										
<b>Mobil DTE 22</b>	22	21	4.5	98	0.86	-30	200		DIN 51524-2 2006-09	
Zinc-containing premium-quality antiwear industrial hydraulic fluid. Optimum balance of high-quality base stocks with antiwear agents for maximised keep clean and antiwear protection. Long service life and good filterability even in the presence of water.										
<b>Mobil DTE 24</b>	32	31.5	5.3	98	0.87	-27	220	Denison HF-O, Vickers I-286-S, Vickers M-2950-S Five Cincinnati P-68	DIN 51524-2 2006-09	
Zinc-containing premium-quality antiwear industrial hydraulic fluid. Optimum balance of high-quality base stocks with antiwear agents for maximised keep clean and antiwear protection. Long service life and good filterability even in the presence of water.										
<b>Mobil DTE 25</b>	46	44.2	6.7	98	0.88	-27	232	Denison HF-O, Vickers I-286-S, Vickers M-2950-S, Husky HS 207 Fives Cincinnati P-70	DIN 51524-2 2006-09	
Zinc-containing premium-quality antiwear industrial hydraulic fluid. Optimum balance of high-quality base stocks with antiwear agents for maximised keep clean and antiwear protection. Long service life and good filterability even in the presence of water.										
<b>Mobil DTE 26</b>	68	71.2	8.5	98	0.88	-21	236	Denison HF-O, Vickers I-286-S, Vickers M-2950-S Fives Cincinnati P-69	DIN 51524-2 2006-09	
Zinc-containing premium-quality antiwear industrial hydraulic fluid. Optimum balance of high-quality base stocks with antiwear agents for maximised keep clean and antiwear protection. Long service life and good filterability even in the presence of water.										
<b>Mobil DTE 27</b>	100	95.3	10.9	98	0.89	-21	248			
Zinc-containing premium-quality antiwear industrial hydraulic fluid. Optimum balance of high-quality base stocks with antiwear agents for maximised keep clean and antiwear protection. Long service life and good filterability even in the presence of water.										

\* Energy efficiency relates solely to the fluid performance when compared to ExxonMobil's standard hydraulic fluids. The technology used allows up to 6 % increase in hydraulic pump efficiency compared to Mobil DTE 20 series when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with all applicable industry standards and protocols. In case of queries, please consult TechDeskEurope@exxonmobil.com



Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Hydraulic EAL 32</b> 	32	31.1	6.2	152	0.94	-33	282	EU Eco Label Blue Angel (RAL-UZ 178) DENISON HF-1, DENISON HF-2, DENISON HF-6 USDA Certified BioBased Product	ISO ISO L-HEES, (ISO 15380, 2011), JCMAS HKB VG32L (JCMAS P042:2004), US EPA VGP:2013, WGK 1 - Low Hazard to Waters	
Mobil SHC™ Hydraulic EAL fluids are high performance biodegradable synthetic hydraulic oils for modern hydraulic systems. The fluids are designed to meet the demand for environmentally acceptable hydraulic lubricants. Mobil SHC Hydraulic EAL fluids are exceptionally high quality, wide-temperature, shear-stable hydraulic oils with controlled low-temperature pumpability properties and maximised anti-wear protection for hydraulic systems operating under high load and high pressures.										
<b>Mobil SHC Hydraulic EAL 46</b> 	46	43.3	7.7	149	0.93	-33	298	EU Eco Label Blue Angel (RAL-UZ 178) DENISON HF-1, DENISON HF-2, DENISON HF-6 Eaton Corporation Brochure No. 03-401- 2010, Rev 1, USDA Certified BioBased Product	ISO ISO L-HEES, (ISO 15380, 2011), JCMAS HKB VG46L (JCMAS P042:2004), US EPA VGP:2013, WGK 1 - Low Hazard to Waters	
Mobil SHC™ Hydraulic EAL fluids are high performance biodegradable synthetic hydraulic oils for modern hydraulic systems. The fluids are designed to meet the demand for environmentally acceptable hydraulic lubricants. Mobil SHC Hydraulic EAL fluids are exceptionally high quality, wide-temperature, shear-stable hydraulic oils with controlled low-temperature pumpability properties and maximised anti-wear protection for hydraulic systems operating under high load and high pressures.										
<b>Mobil SHC Hydraulic EAL 68</b> 	68	71	11	144	0.92	-27	292	EU Eco Label Blue Angel (RAL-UZ 178) DENISON HF-1, DENISON HF-2, DENISON HF-6 Eaton Corporation Brochure No. 03-401- 2010, Rev 1, USDA Certified BioBased Product	ISO ISO L-HEES, (ISO 15380, 2011), US EPA VGP:2013, WGK 1 - Low Hazard to Waters	
Mobil SHC™ Hydraulic EAL fluids are high performance biodegradable synthetic hydraulic oils for modern hydraulic systems. The fluids are designed to meet the demand for environmentally acceptable hydraulic lubricants. Mobil SHC Hydraulic EAL fluids are exceptionally high quality, wide-temperature, shear-stable hydraulic oils with controlled low-temperature pumpability properties and maximised anti-wear protection for hydraulic systems operating under high load and high pressures.										
<b>Univis HVI 13</b>		13.5	5.3	404		-60	101			
Zinc-containing premium-performance antiwear hydraulic oil characterised by very high VI. Possess high resistance to viscosity change. Applications include severe hydraulic systems used in hydrostatic transmissions and dash pots, fine instruments and servo valves.										
<b>Univis HVI 26</b>		25.8	9.3	376		-60	103			
Zinc-containing premium-performance antiwear hydraulic oil characterised by very high VI. Possess high resistance to viscosity change. Applications include severe hydraulic systems used in hydrostatic transmissions and dash pots, fine instruments and servo valves.										
<b>Univis N 32</b>	32	32	6.4	151	0.88	-48	208		DIN 51524-3 2006-9, ISO L-HV (ISO 11158, 1997)	Denison HF-0, Eaton I-286-S, Eaton M-2950-S
Zinc-containing premium high-performance antiwear hydraulic oil that exhibits high VI. Can be used in a wide variety of industrial, mobile and marine applications.										
<b>Univis N 46</b>	46	46	8.2	152	0.88	-48	216		DIN 51524-3 2006-9, ISO L-HV (ISO 11158, 1997)	Denison HF-0, Eaton I-286-S, Eaton M-2950-S
Zinc-containing premium high-performance antiwear hydraulic oil that exhibits high VI. Can be used in a wide variety of industrial, mobile and marine applications.										

\*\* Energy efficiency relates solely to the fluid performance when compared to ExxonMobil's standard hydraulic fluids. The technology used provides up to 3.6 % efficiency compared to Mobil DTE 25 when tested in a Eaton 25VMQ vane pump under controlled conditions in accordance with applicable industry standards and protocols. Efficiency improvements will vary based on operating conditions and application.



# Hydraulic Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Univis N 68</b>	68	68	11	151	0.88	-42	222		DIN 51524-3 2006-9, ISO L-HV (ISO 11158, 1997)	Denison HF-0, Eaton I-286-S, Eaton M-2950-S
	Zinc-containing premium high-performance antiwear hydraulic oil that exhibits high VI. Can be used in a wide variety of industrial, mobile and marine applications.									
<b>Nuto H 32</b>	32	32	5.4	104	0.87	-24	212	Denison HF-0	DIN 51524-2 2006-09, ISO L-HM (ISO 11158, 1997)	Vickers I-286-S & M-2950-S
	Zinc-containing premium-quality antiwear hydraulic oil intended for industrial and mobile service applications where antiwear lubricants are required.									
<b>Nuto H 46</b>	46	46	6.7	104	0.88	-24	226	Denison HF-0	DIN 51524-2 2006-09, ISO L-HM (ISO 11158, 1997)	Vickers I-286-S & M-2950-S
	Zinc-containing premium-quality antiwear hydraulic oil intended for industrial and mobile service applications where antiwear lubricants are required.									
<b>Nuto H 68</b>	68	68	8.5	107	0.88	-18	234	Denison HF-0	DIN 51524-2 2006-09, ISO L-HM (ISO 11158, 1997)	Vickers I-286-S & M-2950-S
	Zinc-containing premium-quality antiwear hydraulic oil intended for industrial and mobile service applications where antiwear lubricants are required.									
<b>Mobil Hydraulic Oil HLPD 32</b>	32	32	5.4	102	0.87	-27	205		DIN 51524-2: 2006-09	
	Mobil Hydraulic Oil HLPD series are mineral oil-based hydraulic fluids containing a selective additive system particularly good dispersancy and detegency capabilities for applications where severe contamination can occur. Such applications as machine tools with water miscible cutting fluids or off-highway vehicles.									
<b>Mobil Hydraulic Oil HLPD 46</b>	46	46	6.7	97	0.88	-27	210		DIN 51524-2: 2006-09	
	Mobil Hydraulic Oil HLPD series are mineral oil-based hydraulic fluids containing a selective additive system particularly good dispersancy and detegency capabilities for applications where severe contamination can occur. Such applications as machine tools with water miscible cutting fluids or off-highway vehicles.									
<b>Mobil Hydraulic Oil HLPD 68</b>	68	68	8.6	99	0.88	-24	225		DIN 51524-2: 2006-09	
	Mobil Hydraulic Oil HLPD series are mineral oil-based hydraulic fluids containing a selective additive system particularly good dispersancy and detegency capabilities for applications where severe contamination can occur. Such applications as machine tools with water miscible cutting fluids or off-highway vehicles.									
<b>Mobil Hydraulic Oil M 46</b>	46	46	6.8		0.875	-27	210	Müller- Weingarten	DIN 51524-2: 2006-09	
	Zinc free and ashless hydraulic oil. Formulated with high-quality solvent-refined base oils. It is free from ash-forming components, silicone and zinc. It exhibits excellent EP and corrosion protection properties, outstanding oxidation and thermal stability, small foaming tendency as well as good water separation characteristics. Particularly suited and designed for Muller Weingarten hydraulic presses.									
<b>Mobil Pyrotec HFC 46</b>	46	46	9.5	195		-50		Factory Mutual Global Standard 6930, ISO L-HFC (ISO/DIS 12922)	Factory Mutual-Standard 6930, ISO L-HFC (ISO/DIS 12922)	
	HFC type water glycol hydraulic fluid technology with improved fire resistance while protecting equipment under severe service conditions. Designed particularly for hydraulic systems utilizing vane, gear and piston hydraulic pumps used in, for example, the steel, aluminum and die casting industries.									
<b>Mobil Pyrotec HFD 46</b>	46	43	5			-20	246	Factory Mutual Global Standard 6930	FM Global Standard 6930	
	Fire resistant phosphoric acid ester based HF-R fluid. Designed especially for use in turbine control systems requiring HFD-R fluids.									



Brand name	ISO VG	Kinematic Viscosity <i>mm<sup>2</sup>/s</i>		Viscosity Index	Density at 15°C <i>g/cm<sup>3</sup></i>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil 600 W Super Cylinder Oil</b>	460	460	30.5	95	0.91	-6	282			
	Extra high-performance, high viscosity oil for steam cylinders. Lubrication of high load and slow moving bearings and gears. Also suitable for use in worm gears.									
<b>Mobil Extra Hecla Super Cylinder Oil Mineral</b>	1000	1000	42	80	0.92	3	288			
	Extra high-performance, high viscosity oil for steam cylinders. Lubrication of high load and slow moving bearings and gears. Also suitable for use in worm gears. Recommended where ready separation from condensate is essential.									



## Refrigeration Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Gargoyle Arctic SHC 224</b>	32	29	5.6	132	0.82	-54	230	NSF-H1- Registration Number 123 194	FDA 21 CFR 178.3570	
	Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.									
<b>Mobil Gargoyle Arctic SHC 226 E</b>	68	69	10.1	136	0.83	-50	266	NSF-H1-Registration Number 133 449	FDA 21 CFR 178.3570	
	Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.									
<b>Mobil Gargoyle Arctic SHC 228</b>	100	97	13.7	147	0.84	-45	255	NSF-H1- Registration Number 138 669	FDA 21 CFR 178.3570	
	Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.									
<b>Mobil Gargoyle Arctic SHC 230</b>	220	220	25	149	0.85	-39	260	NSF-H1- Registration Number 123 197	FDA 21 CFR 178.3570	
	Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.									
<b>Mobil Gargoyle Arctic SHC NH 68</b>	68	64	8.5	111	0.85	-54	211			
	Synthetic refrigeration compressor oil. Recommended for screw and reciprocating compressors, using ammonia as refrigerant. Compatible with mineral lubricants.									
<b>Mobil Gargoyle Arctic Oil 155</b>	32	32			0.91	-42	190			
	High-performance naphthenic mineral oil for refrigeration compressors. Low pour point and excellent fluidity at very low temperatures. Food freezing, cold storage plants and marine applications. For ammonia refrigerant but also selected halo-carbons. Not for HFC refrigerants.									
<b>Mobil Gargoyle Arctic C Heavy</b>	46	46			0.91	-39	195			
	High-performance naphthenic mineral oil for refrigeration compressors. Low pour point and excellent fluidity at very low temperatures. Food freezing, cold storage plants and marine applications. For ammonia refrigerant but also selected halocarbons. Not for HFC refrigerants.									
<b>Mobil Gargoyle Arctic Oil 300</b>	68	68			0.91	-36	200			
	High-performance naphthenic mineral oil for refrigeration compressors. Low pour point and excellent fluidity at very low temperatures. Food freezing, cold storage plants and marine applications. For ammonia refrigerant but also selected halocarbons. Not for HFC refrigerants.									
<b>Mobil EAL Arctic 22</b>	22	23.2	4.6	130	1.00	-57	236			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation.									





Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil EAL Arctic 22 cc</b>	22	24	4.8	129	0.99	-54	236			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation. Especially suitable for Copeland compressors.									
<b>Mobil EAL Arctic 32</b>	32	34.2	5.8	115	0.98	-48	236			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation.									
<b>Mobil EAL Arctic 46</b>	46	49.2	7.3	115	0.97	-42	230			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation.									
<b>Mobil EAL Arctic 68</b>	68	68	8.7	95	0.96	-36	230			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation.									
<b>Mobil EAL Arctic 100</b>	100	105	11.6		0.97	-30	>250			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation.									
<b>Mobil EAL Arctic 220</b>	220	226	18.5	90	0.96	-21	290			
	Synthetic, high-performance Environmental Awareness Lubricant (EAL) based on synthesised polyol esters (POEs). Outstanding lubricity, wear protection, chemical and thermal stability. For refrigeration compressors using ozone-friendly HFC refrigerants. Suitable for commercial refrigeration such as business, shopping mall and hotel air conditioning, and low temperature transportation.									
<b>Mobil Zerice S 32</b>	32	32	4.2		0.86	-33	154			
	Synthetic, premium-quality refrigeration compressor oil based on alkyl benzenes. For a wide range of industrial reciprocating and rotary compressors. Due to its chemical nature excellent miscibility with fluorocarbon refrigerants such as R22. This allows very low temperature applications, down to -60 °C.									
<b>Mobil Zerice S 46</b>	46	46	5.4		0.87	-30	154			
	Synthetic, premium-quality refrigeration compressor oil based on alkyl benzenes. For a wide range of industrial reciprocating and rotary compressors. Due to its chemical nature excellent miscibility with fluorocarbon refrigerants such as R22. This allows very low temperature applications, down to -60 °C.									
<b>Mobil Zerice S 68</b>	68	68	6.5		0.87	-27	174			
	Synthetic, premium-quality refrigeration compressor oil based on alkyl benzenes. For a wide range of industrial reciprocating and rotary compressors. Due to its chemical nature excellent miscibility with fluorocarbon refrigerants such as R22. This allows very low temperature applications, down to -60 °C.									
<b>Mobil Zerice S 100</b>	100	100	8		0.87	-27	186			
	Synthetic, premium-quality refrigeration compressor oil based on alkyl benzenes. For a wide range of industrial reciprocating and rotary compressors. Due to its chemical nature excellent miscibility with fluorocarbon refrigerants such as R22. This allows very low temperature applications, down to -60 °C.									



## Compressor Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Rarus 32</b>	32	30.6	5.6	123	0.88	-42	204			
	Supreme-performance synthetic air compressor lubricant primarily intended for the lubrication of severe duty rotary screw and vane air compressors. Particularly suited for severe service where synthetic oil-based products are not meeting expectations such as in severe applications subjected to high final compression temperatures or where extended oil drain intervals are desired. Provides the potential to deliver up to 3 times oil drain interval versus a leading synthetic compressor lubricants. Not for air compressors used in breathing air applications.									
<b>Mobil SHC Rarus 46</b>	46	44.1	7.1	122	0.87	-42	197			
	Supreme-performance synthetic air compressor lubricant primarily intended for the lubrication of severe duty rotary screw and vane air compressors. Particularly suited for severe service where synthetic oil-based products are not meeting expectations such as in severe applications subjected to high final compression temperatures or where extended oil drain intervals are desired. Provides the potential to deliver up to 3 times oil drain interval versus a leading synthetic compressor lubricants. Not for air compressors used in breathing air applications.									
<b>Mobil SHC Rarus 68</b>	68	65.3	9.7	129	0.87	-39	192			
	Supreme-performance synthetic air compressor lubricant primarily intended for the lubrication of severe duty rotary screw and vane air compressors. Particularly suited for severe service where synthetic oil-based products are not meeting expectations such as in severe applications subjected to high final compression temperatures or where extended oil drain intervals are desired. Provides the potential to deliver up to 3 times oil drain interval versus a leading synthetic compressor lubricants. Not for air compressors used in breathing air applications.									
<b>Mobil Rarus SHC 1024</b>	32	31.5	5.7	127	0.85	-48	245			
	Synthetic, PAO based supreme-performance oil for the lubrication of rotary screw and vane air compressors and for exhaust gas turbochargers. Reduced deposit formation. Stationary and mobile applications. Long service life.									
<b>Mobil Rarus SHC 1025</b>	46	44	7.2	131	0.85	-45	246			
	Synthetic, PAO based supreme-performance oil for the lubrication of rotary screw and vane air compressors and for exhaust gas turbochargers. Reduced deposit formation. Stationary and mobile applications. Long service life.									
<b>Mobil Rarus SHC 1026</b>	68	66.6	10.1	136	0.86	-45	246			
	Synthetic, PAO based supreme-performance oil for the lubrication of rotary screw and vane air compressors and for exhaust gas turbochargers. Reduced deposit formation. Stationary and mobile applications. Long service life.									
<b>Mobil Rarus 827</b>	100	107.5	10.1	66		-36	270			
	Synthetic, diester based supreme-performance air compressor oil. For use for severe duty reciprocating air compressors. Stationary and mobile equipment.									
<b>Mobil Rarus 829</b>	150	158	13.2	70		-40	270			
	Synthetic, diester based supreme-performance air compressor oil. For use for severe duty reciprocating air compressors. Stationary and mobile equipment.									




Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Rarus PE KPL 201</b>		117			0.87	-12	230	NSF-H1-Registration Number 146247	FDA 21 CFR 178.3570, European Directive 2002/72/EC, USP-NF<661> (vol.1, 2008), FDA Processing Aid in production of Polymers compliant with 177.1520	
	Specifically designed for the lubrication of very high pressure ethylene and co-monomers compressors up to 3400 bars. High purity components. Do not induce any discolouration or odour in the final polymer.									
<b>Mobil Rarus 424</b>	32	32	5.4	105	0.87		236		DIN 51506 VD-L	
	Premium-performance ashless air compressor oil. Single and multistage air compressors. Suitable for reciprocating and preferentially for rotary type compressors. Excellent wear protection. Stationary and mobile applications.									
<b>Mobil Rarus 425</b>	46	46	6.9	105	0.87		238		DIN 51506 VD-L	
	Premium-performance ashless air compressor oil. Single and multistage air compressors. Suitable for reciprocating and preferentially for rotary type compressors. Excellent wear protection. Stationary and mobile applications.									
<b>Mobil Rarus 426</b>	68	68	8.9	105	0.88		251		DIN 51506 VD-L	
	Premium-performance ashless air compressor oil. Single and multistage air compressors. Suitable for reciprocating and preferentially for rotary type compressors. Excellent wear protection. Stationary and mobile applications.									
<b>Mobil Rarus 427</b>	100	100	11.6	100	0.88		264		DIN 51506 VD-L	
	Premium-performance ashless air compressor oil. Single and multistage air compressors. Suitable for reciprocating and preferentially for rotary type compressors. Excellent wear protection. Stationary and mobile applications.									
<b>Mobil Rarus 429</b>	150	150	14.7	100	0.87		269		DIN 51506 VD-L	
	Premium-performance ashless air compressor oil. Single and multistage air compressors. Suitable for reciprocating and preferentially for rotary type compressors. Excellent wear protection. Stationary and mobile applications.									
<b>Mobil Gas Compressor Oil</b>		175	32.3	230	1.06	-36	294			
	Synthetic, polyglycol based compressor oil for the compression of hydrocarbons such as Natural Gas, Propane, and Butane.									
<b>Mobil Vacuum Pump Oil 100</b>		100			0.874	-9	270			
	Premium lubricant, blended from specific high-quality white oils with low volatility characteristics, for the lubrication of vacuum pumps.									



## Air Tool Oils

Brand name	ISO VG	Kinematic Viscosity <i>mm<sup>2</sup>/s</i>		Viscosity Index	Density at 15°C <i>g/cm<sup>3</sup></i>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Almo 525</b>	46	46	7.3	105	0.88	-24	188			
	<i>Premium-quality, high-performance lubricant, suitable for pneumatically operated rock drills in underground and surface mining</i>									
<b>Mobil Almo 527</b>		112.9	11.4	91	0.9	-30	204			
	<i>Premium-quality, high-performance lubricant, suitable for pneumatically operated rock drills in underground and surface mining</i>									



Brand name	SAE Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	TBN mg KOH/g	Ash wt.-%	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications
		40°C	100°C							Approved
<b>Mobil SHC Pegasus 30</b> 	30	65	10.5	162	5	0.5	0.842	-42	225	**see note
										High-performance gas engine oil providing today's high output, low-emission four-cycle gas engines with the highest levels of protection. Detergent-dispersant system controls the formation of carbon and varnish deposits to minimize oil consumption and maintain engine cleanliness even during extended drain intervals. Potential benefit of fuel consumption reductions. *see note
<b>Mobil SHC Pegasus 40</b>	40	82	13	150	5.6	0.56	0.847	-18	210	**see note
										High-performance gas engine oil providing today's high output, low-emission four-cycle gas engines with the highest levels of protection. Detergent-dispersant system controls the formation of carbon and varnish deposits to minimize oil consumption and maintain engine cleanliness even during extended drain intervals.
<b>Mobil Pegasus 1</b>	15W-40	93.8	13.0	137	6.5	0.5	0.854	-48	238	**see note
										Synthetic, high-performance gas engine oil. For most demanding naturally aspirated and turbocharged stoichiometric and lean-burn gas engines.
<b>Mobil Pegasus 1005</b>	40	125	13.0	100	5	0.5	0.85	-15	247	**see note
										High-performance gas engine oil providing today's high output, low-emission four-cycle gas engines with the highest levels of protection. Detergent-dispersant system controls the formation of carbon and varnish deposits to minimize oil consumption and maintain engine cleanliness even during extended drain intervals.
<b>Mobil Pegasus 805</b>	40	125	13	100	5	0.5	0.85	-15	247	**see note
										Premium-performance gas engine oil. For high output 4-stroke engines.
<b>Mobil Pegasus 705</b>	40	126.2	13.2	98	5.6	0.5	0.887	-18	252	**see note
										High-quality gas engine oil for medium and high speed gas engines under heavy-duty operation, with high neutralisation capacity.
<b>Mobil Pegasus 710</b>	40	121	13.2	98	6.5	1.0	0.896	-15	249	**see note
										High-performance gas engine oil for mildly aggressive biogases.
<b>Mobil Pegasus 605</b>	40	126	13.3	96	7.1	0.5	0.887	-15	255	**see note
										High-performance gas engine oil for medium and high speed 4-stroke engines operating on corrosive fuel such as hydrogen sulphide and halogens.
<b>Mobil Pegasus 610</b>	40	131	13.3	98	10.8	0.98	0.889	-18	257	**see note
										High-performance gas engine oil for medium and high speed 4-stroke engines operating on corrosive fuel such as hydrogen sulphide and halogens.
<b>Mobil Pegasus 605 Ultra 40</b>	40	137.5	15.0	110	5.3	0.6	0.850	-21	268	**see note
										Latest generation of gas engine oil primarily intended for the lubrication of modern medium and high-speed four-cycle engines operating on landfill gas that contains contaminants such as hydrogen sulphide, halides or siloxane. Very good anti-wear and anti-scurf performance.
<b>Mobil Pegasus SR</b>	40	130	14.0	104	6	0.5	0.88	-15	246	**see note
										High-performance, anti-scurf performance, natural gas engine oil specifically formulated for the lubrication of modern medium and high-speed four-cycle engines operating on landfill gas containing corrosive materials such as, hydrogen sulphide or halogens (compounds containing chlorine, fluorine, etc.) and abrasive materials such as siloxanes.

\* The fuel efficiency of Mobil SHC Pegasus 30 relates solely to the fluid performance when compared with ExxonMobil standard SAE 40 natural gas engine oils. The technology used allows up to a 1.5 % increase in fuel efficiency compared with Mobil Pegasus 1005 and 805 Series when tested in standard natural gas engine applications under controlled conditions. Efficiency improvements will vary based on operating conditions. The energy efficiency claim for this product is based on test results from the use of the fluid conducted in accordance with all applicable industry standards and protocols.

\*\* Mobil Pegasus products contain a wide range of approvals so for up-to-date information on approvals can be obtained through the respective Equipment Builder manuals or contact your ExxonMobil Sector specialist or visit mobilindustrial.com.





## Heat Transfer Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobiltherm 594</b>		4.8	1.5		0.85	-42	135			
	Naphthenic, chlorine-free mineral heat transfer oil for use in indirect heat transfer systems. It is characterized by its exceptionally low pour point, high level of thermal stability, a low viscosity in the entire range of operating temperature and good heat transfer performance.									
<b>Mobiltherm 603</b>		20.2	4.2		0.9	-15	194			
	High-performance heat transfer fluid, based on highly refined mineral base stocks. Good heat transfer efficiency. High flash point and good resistance to thermal cracking. For use in both open and closed heating and cooling systems.									
<b>Mobiltherm 605</b>		30.4	5.4		0.86	-12	230			
	High-performance heat transfer fluid, based on highly refined mineral base stocks. Good heat transfer efficiency. High flash point and good resistance to thermal cracking. For use in both open and closed heating and cooling systems.									
<b>Mobiltherm 610</b>		113	11.5		0.88	-6	250			
	High-performance heat transfer fluid, based on highly refined mineral base stocks. Good heat transfer efficiency. High flash point and good resistance to thermal cracking. For use in both open and closed heating and cooling systems.									
<b>Mobiltherm 611</b>		490	31.7		0.9	-6	300			
	High-performance heat transfer fluid, based on highly refined mineral base stocks. Good heat transfer efficiency. High flash point and good resistance to thermal cracking. For use in both open and closed heating and cooling systems. Proven performance for heating and lubrication of calenders.									



Brand name	Refracto- meter Correktion Factor	Appearance of Emulsion	pH at 5 %	Mineral Oil Content %	Specifications		
					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
Mobilcut 100	0.95	Milky	8.9	80			
	Macroemulsion, conventional metalworking fluid that readily mixes with different waters to form stable emulsions. Suitable for a wide range of both, ferrous and non ferrous materials in light to moderate duty machining operations, such as milling, turning, sawing, boring, drilling and reaming. Long-term corrosion protection for components and machine tools.						
Mobilcut 140	1.0	Milky	9.1	48			
	Macroemulsion, conventional, long life metalworking fluid with enhanced lubricity. Suitable for a wide variety of materials such as aluminum and high machinability steels in moderate to heavy-duty operations such as milling, turning, sawing, boring, drilling and reaming where the lubricity of a soluble oil is desired.Increased tool life and surface finish, even in difficult machining operations.						
Mobilcut 210	1.85	Translucent	9.1	20			
	Semi-synthetic microemulsion, metalworking fluid for a wide water hardness range. Having a relatively low oil content, the product has good detergent, coolant and cutting properties, making it suitable for light to moderate duty cutting and grinding operations on ferrous/non ferrous materials and on cast iron. Not recommended for aluminum.						
Mobilcut 230	1.1	Translucent	9.3	47			
	Semi-synthetic mikroemulsion, metalworking fluid that readily emulsifies over a wide water hardness range. Resistant to foaming, even in high pressure systems. Primarily recommended for machining steels, easier to machine stainless steels, and cast iron in milling, turning, sawing, boring, drilling and reaming. Extended coolant life, easy to maintain.						
Mobilcut 240	1.7	Translucent	9.1	20			
	Semi-synthetic microemulsion, metalworking fluid based on innovative technology that offers some outstanding advantages including hard water compatibility, machine tool cleanliness and long term stability. For cast iron and moderate to operate steels. Free from added boron and boric acid, hence meeting the latest Health and Safety related trends. Not for aluminum and aluminum alloys.						
Mobilcut 250	0.9	Translucent	9.4	43			
	Semi-synthetic microemulsion, metalworking fluid formulated to enhance performance when machining aluminum and aluminum alloys and where low staining potential is important on sensitive components. Containing high levels of lubricity agents, it provides high machining performance of carbon and alloy steels and of yellow metals.						
Mobilcut 260	1.02	Translucent	9.8	40			
	Semi-synthetic microemulsion, metalworking fluid for a wide variety of metals and all kind of operations. Especially for aluminum and aluminum alloys, but also suitable for copper alloys.						
Mobilcut 320	1.45	Clear	8.9	0			
	Inherently stable, synthetic (mineral oil-free) metalworking fluid. Designed for grinding operations, primarily of steels and cast iron, where a high-quality surface finish, outstanding cooling and low foaming potential are the primary requirements. Helps maintain free and open grinding wheels for maximum performance and shows a marked stability for long service life.						



## Cutting Fluids – Neat

Brand name	Kinematic Viscosity mm <sup>2</sup> /s		Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
	40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilmet 423</b>	15	3.5	0.86	-15	182			
	Multi-purpose cutting oils, designed for light to moderate duty cutting and grinding operations of aluminum, magnesium, copper, brasses, bronzes and for steels and cast irons. For severe cutting operations of difficult-to-machine non-ferrous alloys such as silicon-copper, silicon-bronze and copper-nickel. Also suitable as machine tool lubricant and for use in light duty hydraulic systems. Non copper-corrosive.							
<b>Mobilmet 424</b>	23	4.9	0.86	-15	200			
	Multi-purpose cutting oils, designed for light to moderate duty cutting and grinding operations of aluminum, magnesium, copper, brasses, bronzes and for steels and cast irons. For severe cutting operations of difficult-to-machine non-ferrous alloys such as silicon-copper, silicon-bronze and copper-nickel. Also suitable as machine tool lubricant and for use in light duty hydraulic systems. Non copper-corrosive.							
<b>Mobilmet 426</b>	32	5.7	0.87	-15	210			
	Multi-purpose cutting oils for critical cutting operations of non ferrous metals and for automatic operations on materials having a Brinell hardness up to 300. Also suitable as machine tool lubricant. Non copper-corrosive.							
<b>Mobilmet 427</b>	46	6.9	0.88	-12	212			
	Multi-purpose cutting oils for critical cutting operations of non-ferrous metals and for automatic operations on materials having a Brinell hardness up to 300. Also suitable as machine tool lubricant. Non copper-corrosive.							
<b>Mobilmet 443</b>	15.3	3.8	0.86	-33	170			
	Multi-purpose, straight cutting fluid, for moderate to severe duty operations such as gear hobbing, gear cutting and shaving, gear and thread grinding, milling, broaching and for automatic operations of steels and non-ferrous metals. Also suitable for machine tool lubrication. Non copper-corrosive.							
<b>Mobilmet 446</b>	32.6	6.0	0.88	-24	190			
	Multi-purpose, straight cutting fluid, for moderate to severe duty operations such as gear hobbing, gear cutting and shaving, gear and thread grinding, milling, broaching and for automatic operations of steels and non-ferrous metals. Also suitable for machine tool lubrication. Non copper-corrosive.							
<b>Mobilmet 447</b>	45.9	7.4	0.89	-33	220			
	Multi-purpose, straight cutting fluid, for moderate to severe duty operations such as gear hobbing, gear cutting and shaving, gear and thread grinding, milling, broaching and for automatic operations of steels and non-ferrous metals. Also suitable for machine tool lubrication. Non copper-corrosive.							
<b>Mobilmet 762</b>	10	3.0	0.87		160			
	Extra high-performance neat cutting oil, intended for severe cutting operations such as deep hole drilling (less than 20 mm diameter), threading, tapping, parting-off and automatic lathe operations on small work pieces especially on difficult to machine steels. Not recommended for use with copper and it's alloys.							
<b>Mobilmet 763</b>	18	4.0	0.87		180			
	Extra high-performance neat cutting oil, intended for severe cutting operations such as deep hole drilling (greater than 20 mm diameter), drilling, tapping, threading, milling, gear shaping, broaching, parting-off and automatic lathe operations, especially on difficult to machine steels. Not recommended for use with copper and it's alloys.							
<b>Mobilmet 766</b>	36	6.0	0.88		205			
	Extra high-performance neat cutting oil, intended for severe cutting operations such as tapping, threading, milling, gear shaving and shaping, broaching, planing, parting-off and automatic lathe operations especially on difficult to machine steels. Not recommended for use with copper and it's alloys.							










Brand name	Kinematic Viscosity mm <sup>2</sup> /s		Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
	40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgrind 14</b>	6	2.0	0.78		150			
	Designed for light duty cylindrical and surface grinding of carbon and alloy steels. Formulated with high-quality additives and base oils to help reduce misting and maintain viscosity at the point of application. Low viscosity helps fines to settle out quickly from the oil and assists filtration of the oil for re-use in circulation systems. Bright, clear, non copper-corrosive.							
<b>Mobilgrind 24</b>	7	2.5	0.83		130			
	Medium duty product for honing and grinding applications on steels of a varying hardness, particularly well suited for rough and finish honing of safety razor blades and for use in large volume circulation systems where continuous filtration is employed, non copper-corrosive.							
<b>Mobilgrind 26</b>	12	3.0	0.79		170			
	Medium duty product for finish grinding of hardened steels and other carbon alloys. May also be used for light duty machining operations where a low viscosity, low misting product is required. Bright and clear, low evaporation, non copper-corrosive, efficient removal of fines from the cutting area.							
<b>Mobilgrind 36</b>	15	2.5	0.80		180	Kapp GmbH		
	Medium/heavy-duty product intended for finish grinding of hardened steels. It has excellent wettability to avoid burning and keep grinding wheels clean. Bright and clear, low evaporation, non copper-corrosive, efficient removal of fines from the cutting area.							
<b>Mobilgrind 37</b>	20	4.0	0.82		200			
	Intended for medium/heavy-duty form grinding applications such as mill and drill flute grinding, helps minimizing staining of the flutes in these high speed operations. May also be used as a hydraulic fluid. Bright and clear, low evaporation, non copper-corrosive, efficient removal of fines from the cutting area.							



## Rust Preventives

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilarma 524</b>		88.4	10.5		0.882	-18	218			
	Mineral oil based, solvent-free rust preventive, primarily intended as run-in or lay-up lubricant, for temporary corrosion protection of engines, gear boxes and other industrial equipment. May also be used as short time run-in lubricant for diesel and gasoline engines according to OEMs recommendations.									
<b>Mobilarma 798</b>			23.1				238			
	Mineral oil based, solvent-free rust preventative, forms a self-healing grease-like film. For long term corrosion protection in outdoor applications, especially for wire ropes. Dropping Point 63°C.									
<b>Mobilarma 778</b>		39			0.88	-3	190			
	Mineral oil based, solvent-free corrosion preventive for short and medium term protection of cold-rolled sheet and coiled steel, coating for precision machined parts and instruments during storage, die lubricant in some light duty pressing operation. Lower evaporation tendency for enhanced operator safety.									
<b>Mobilarma LT</b>		4.4			0.845		65			
	Wax-like, solvent containing rust preventive, providing medium to long term protection of ferrous and alloy components during storage, e.g. engine components, automotive parts as well as extruded and machined surfaces. (Film thickness 4,0 µm protection indoor max. 24 month, protection outdoor max. 12 month).									
<b>Mobilarma MT</b>		1.8			0.813		55			
	Grease-like, solvent containing rust preventive, providing medium term protection of ferrous and alloy components during storage and transit. It is particularly suitable for the protection of highly machined precision parts where heavy films are not desirable. (Film thickness 0,8 µm, protection indoor max. 9 month, protection outdoor max. 2 month).									
<b>Mobilarma SF</b>		33			0.88		160			
	Mineral oil based, solvent-free rust preventive, for sheet steel, coil, wire and bar which improves lubricity and adhesion during reeling and straightening. Can be used by dip, flood, spray or electrostatic blade coater.									




Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Cibus 32</b> 	32	30	5.8	140	0.829	< -54	253	Kosher, Halal, NSF-H1-Registration Number 141 500	FDA 21 CFR 178.3570, DIN 51506 VDL, DIN 51524 HLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as hydraulic, circulation, compressor and vacuum equipment. Energy saving potential.										
<b>Mobil SHC Cibus 46</b> 	46	43	7.7	148	0.833	-51	258	Kosher, Halal, NSF-H1-Registration Number 141 498	FDA 21 CFR 178.3570, DIN 51506 VDL, DIN 51524 HLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as hydraulic, circulation, compressor and vacuum equipment. Energy saving potential.										
<b>Mobil SHC Cibus 68</b> 	68	72	11.4	151	0.838	-48	267	Kosher, Halal, NSF-H1-Registration Number 141 499	FDA 21 CFR 178.3570, DIN 51506 VDL, DIN 51524 HLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as hydraulic, circulation, compressor and vacuum equipment. Energy saving potential.										
<b>Mobil SHC Cibus 100</b> 	100	100	14.6	143	0.839	-45	270	Kosher, Halal, NSF-H1-Registration Number 145 255	FDA 21 CFR 178.3570 DIN 51506 VDL, DIN 51517 CLP, DIN 51524 HLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as gears, bearings and circulation equipment. Energy saving potential.										
<b>Mobil SHC Cibus 150</b> 	150	162	20.7	150	0.843	-21	226	Kosher, Halal, NSF-H1-Registration Number 141 502	FDA 21 CFR 178.3570, DIN 51517 CLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as gears, bearings and circulation equipment. Energy saving potential.										
<b>Mobil SHC Cibus 220</b> 	220	222	24.5	139	0.857	-24	274	Kosher, Halal, NSF-H1-Registration Number 141 503	FDA 21 CFR 178.3570, DIN 51517 CLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as gears, bearings and circulation equipment. Energy saving potential.										
<b>Mobil SHC Cibus 320</b> 	320	311	32.7	147	0.854	-42	284	Kosher, Halal, NSF-H1-Registration Number 141 505	FDA 21 CFR 178.3570, DIN 51517 CLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as gears, bearings and circulation equipment. Energy saving potential.										

\* The energy efficiency design is a trademark of Exxon Mobil Corporation. Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade. Under controlled conditions the technology used allows efficiency gains up to 3.6% when tested in a worm gearbox and up to 3.5% compared to Mobil DTE™ 25 when tested in an Eaton 25VMQ hydraulic vane pump. Efficiency improvements will vary based on operating conditions and applications.





## Food Industry Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Cibus 460</b> 	460	458	43.6	148	0.856	-42	294	Kosher, Halal, NSF-H1-Registration Number 141 5011	FDA 21 CFR 178.3570, DIN 51517 CLP	
Premium-quality synthetic lubricant, designed to provide outstanding equipment protection, long oil life and problem-free operation in the food and beverage processing and packaging industries. Suitable for use in food processing machinery such as gears, bearings and circulation equipment. Energy saving potential.										
<b>Mobil SHC Cibus 32 HT</b>	32	30.4	5.91	135	0.829	-54	234	Kosher, Halal, NSF-H1/ HT1- Registration Number 141 504	FDA 21 CFR 178.3570, DIN 51522 (1998-11)	
Premium-quality synthetic heat transfer oil for use in closed, indirect heating installations. High resistance to thermal cracking and chemical oxidation which results in longer service life.										
<b>Mobil Glygoyle 220</b>	220	220	38.1	225	1.08	-33	265	NSF-H1-Registration Number 136642, Fives Cincinnati P-39	FDA 21 CFR 178.3570	
Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricants are not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and rolling contact bearings in wide variety of applications.										
<b>Mobil Glygoyle 320</b>	320	320	55.2	240	1.08	-33	265	NSF-H1-Registration Number 136643	FDA 21 CFR 178.3570	
Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricant not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and antifriction bearings in wide variety of applications.										
<b>Mobil Glygoyle 460</b>	460	460	77.2	250	1.08	-33	265	NSF-H1-Registration Number 136467, Fives Cincinnati P-39	FDA 21 CFR 178.3570	
Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricant not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and antifriction bearings in wide variety of applications.										
<b>Mobil Glygoyle 680</b>	680	680	112.4	265	1.08	-33	265	NSF-H1-Registration Number 136 468	FDA 21 CFR 178.3570	
Synthetic, high-performance poly-alkylene-glycol (PAG) worm gear lubricant. Provide excellent EP/anti-wear protection, corrosion and rust protection and foam resistance. Compatible with most seals and gaskets, but not with mineral oils. Lubricant not recommended for use with light metal alloys containing Aluminum or Magnesium. Plain and antifriction bearings in wide variety of applications.										
<b>Mobil Gargoyle Arctic SHC 224</b>	32	29	5.6	132	0.82	-54	230	NSF-H1-Registration Number 123 194	FDA 21 CFR 178.3570	
Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.										
<b>Mobil Gargoyle Arctic SHC 226 E</b>	68	69	10.1	136	0.83	-50	266	NSF-H1-Registration Number 133 449	FDA 21 CFR 178.3570	
Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.										

\* The energy efficiency design is a trademark of Exxon Mobil Corporation. Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade in gear applications. The technology used allows up to 3.6 percent efficiency compared with the reference when tested in a worm gearbox under controlled conditions. Efficiency improvements will vary based on operating conditions and applications.



Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
Mobil Gargoyle Arctic SHC 228	100	97	13.7	147	0.84	-45	255	NSF-H1-Registration Number 138 669	FDA 21 CFR 178.3570	
	Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.									
Mobil Gargoyle Arctic SHC 230	220	220	25	149	0.85	-39	260	NSF-H1-Registration Number 123 197	FDA 21 CFR 178.3570	
	Synthetic, supreme-performance lubricant, specifically designed for use in refrigeration compressors and heat pumps. Outstanding resistance to thermal/oxidative degradation. Suitable for use with Ammonia and carbon dioxide as well as for R-22 and other HCFCs.									



## Food Industry Greases

Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgrease FM 101</b>	1	100			Aluminium-complex	260	NSF-H1-Registration Number 141881, Kosher, Parve, Halal,	FDA 21 CFR 178.3570, DIN 51825 (2006:06) KPF 1 K -20	
	Multipurpose grease for the food and beverage industry. Centralized grease distribution systems.								
<b>Mobilgrease FM 222</b>	2	220			Aluminium-complex	260	NSF-H1-Registration Number 136449, Kosher, Parve, Halal, Fives Cincinnati P-72	FDA 21 CFR 178.3570, DIN 51825 (2006:06) KPF 2 K -20	
	Multipurpose grease for the food and beverage industry.								
<b>Mobil SHC Polyrex 005</b>	00	220	30		Polyurea	260	NSF-H1-Registration Number 141947, Kosher/Parve	FDA 21 CFR 178.3570, DIN 51826 (2005:01) GPFHC 00 K-30	
	Supreme-performance synthetic semi-fluid grease designed to improve productivity by solving high temperature lubrication problems in both general industry and food processing applications. Offers a combination of high temperature performance, excellent water resistance and balanced performance properties.								
<b>Mobil SHC Polyrex 222</b>	2	220	30		Polyurea	260	NSF-H1-Registration Number 141946, Kosher/Parve	DIN 51825 (2004:06) KPFHC 2 P-30, FDA 21 CFR 178.3570	
	Supreme-performance synthetic grease designed to improve productivity by solving high temperature lubrication problems in both general industry and food processing applications. Offers a combination of high temperature performance, excellent water resistance and balanced performance properties.								
<b>Mobil SHC Polyrex 462</b>	2	460	40		Polyurea	270	NSF-H1-Registration Number 139558, Kosher/Parve	DIN 51825 (2004:06) KPFHC 2 P-20, FDA 21 CFR 178.3570	
	Supreme-performance synthetic grease designed to improve productivity by solving high temperature lubrication problems in both general industry and food processing applications. Offers a combination of high temperature performance, excellent water resistance and balanced performance properties.								



Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC PM 150</b>	150	158	18.9	124	0.86	-39	220			
	Synthetic, superior-performance lubricant. For use in demanding circulation systems lubricating gears and bearings of high output paper machines and of calendar rolls. Especially suitable for the dryer sections of paper Machines. Readily separates water. Prevents sludge formation due to excellent keep-clean performance.									
<b>Mobil SHC PM 220</b>	220	225	25.6	127	0.86	-36	220			
	Synthetic, superior-performance lubricant. For use in demanding circulation systems lubricating gears and bearings of high output paper machines and of calendar rolls. Especially suitable for the dryer sections of paper Machines. Readily separates water. Prevents sludge formation due to excellent keep-clean performance.									
<b>Mobil SHC PM 320</b>	320	325	34.7	130	0.87	-33	220			
	Synthetic, superior-performance lubricant. For use in demanding circulation systems lubricating gears and bearings of high output paper machines and of calendar rolls. Especially suitable for the dryer sections of paper Machines. Readily separates water. Prevents sludge formation due to excellent keep-clean performance.									
<b>Mobil SHC PM 460</b>	460	465	44.8	137	0.87	-27	220			
	Synthetic, superior-performance lubricant. For use in demanding circulation systems lubricating gears and bearings of high output paper machines and of calendar rolls. Especially suitable for the dryer sections of paper Machines. Readily separates water. Prevents sludge formation due to excellent keep-clean performance.									
<b>Mobil Paper Machine Oil S 220</b>	220	220	27	157	0.86	-39	240			
	Synthetic, high-performance lubricant specifically designed for demanding industrial paper machine circulationsystems. Exceptional protection of gears and bearings even under high load (FZG=12). Excellent colour stability for easy oil monitoring. Prevents sludge formation due to excellent keep-clean performance.									
<b>Mobil DTE PM Excel 150</b>	150	150	14.5	96	0.89	-18	264		DIN 51517-3 2011-08 DIN 51524-2 2006-09 VOITH VN 108 4.3.1 CL 150 VOITH VN 108 4.3.3 HLP 150 VOITH VN 108 4.3.4 CLP 150 METSO PAPER RAUAH02724 METSO PAPER Wet End RAU4L00659 METSO PAPER PBM Dry End RAU4L00659	
	Multipurpose lubricant for press-, wet- and dryer-sections as well as for calendars of paper machines. Provides excellent demusibility and air release, maximum protection of gears and bearings and effective filterability. Prevents sludge formation due to high keep-clean performance.									
<b>Mobil DTE PM Excel 220</b>	220	220	19	95	0.89	-6	260		DIN 51517-3 CLP DIN 51517-2 CL	
	Multipurpose lubricant for press-, wet- and dryer-sections as well as for calendars of paper machines. Provides excellent demusibility and air release, maximum protection of gears and bearings and effective filterability. Prevents sludge formation due to high keep-clean performance.									
<b>Mobil DTE PM 150</b>	150	150	14.7	95	0.88	-6	250			
	Mobil DTE™ PM Series products are high-quality, high-performance lubricants specifically designed for demanding industrial paper machine circulating systems. The Mobil DTE PM Series oils are formulated to provide maximum protection of gears and bearings operating under severe conditions.									
<b>Mobil DTE PM 220</b>	220	220	19	95	0.89	-6	260			
	Mobil DTE™ PM Series products are high-quality, high-performance lubricants specifically designed for demanding industrial paper machine circulating systems. The Mobil DTE PM Series oils are formulated to provide maximum protection of gears and bearings operating under severe conditions.									
<b>Mobil DTE PM 320</b>	320	320	25.4	95	0.89	-6	250			
	Mobil DTE™ PM Series products are high-quality, high-performance lubricants specifically designed for demanding industrial paper machine circulating systems. The Mobil DTE PM Series oils are formulated to provide maximum protection of gears and bearings operating under severe conditions.									



## Paper Machine Greases

Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilith SHC PM 220</b>	1.5	220			Lithium Complex	275		DIN 51825: (2004-06) KPHC 1-2 N-40	
	Designed for use in the most critical antifriction bearing applications in paper machines. Provides outstanding protection against rust and typical acid and alkali water corrosion, making it ideal for the wet end of the paper machine. The low volatility and excellent oxidation stability of the synthetic base stock ensures excellent service at high temperatures typical of dry end conditions.								
<b>Mobilith SHC PM 460</b>	1.5	460			Lithium Complex	275		DIN 51825: (2004-06) KPHC 1-2 N-40	
	Designed for use in the most critical antifriction bearing applications in paper machines. Provides outstanding protection against rust and typical acid and alkali water corrosion, making it ideal for the wet end of the paper machine. The low volatility and excellent oxidation stability of the synthetic base stock ensures excellent service at high temperatures typical of dry end conditions.								
<b>Mobil Centaur XHP 221</b>	1.5	220			Calcium-Sulphonate Complex	318		DIN 51825: (2004-06) KP 1-2 G-20	
	Premium multipurpose grease has been formulated to lubricate antifriction bearings in industrial machinery operating at high temperatures under wet, heavily loaded conditions.								
<b>Mobil Centaur XHP 461</b>	1	460			Calcium-Sulphonate Complex	275		DIN 51825: (2004-06) KPF 1 K-20	
	Multipurpose Calcium Sulphonate Complex Grease, formulated with advanced calcium sulfonate thickener technology. The calcium sulfonate thickener carries both inherent rust protection and extreme pressure (EP) properties. The inherent EP properties exhibit great stability in the presence of water, allowing a balance between wear protection and resistance to corrosion.								



Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		ISO VG	Visco- sity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgear OGL 007</b>	00-0	460				Lithium	200			
	High-performance semi-fluid lubricant that contain EP additives and finely dispersed graphite. Designed for fast, medium and slow open gears in mining, agriculture and cement. Suitable for bath or spray application.									
<b>Mobilgear OGL 009</b>	00-0	1500				Lithium	200			
	High-performance semi-fluid lubricant that contain EP additives and finely dispersed graphite. Designed for fast, medium and slow open gears in mining, agriculture and cement. Suitable for bath or spray application.									
<b>Mobilgear OGL 461</b>	1.5	460				Lithium	200			
	High-performance grease that contains EP additives and finely dispersed graphite. Designed for fast, medium and slow open gears in mining, agriculture and cement. Suitable for bath or spray application.									
<b>Mobiltac 375 NC</b>		5000 (diluted)	1260 (undiluted)							
	High-performance, solvent containing, bitumen based product, intended for the lubrication of open gears over a wide range of environmental conditions and machine requirements.									





## Greases

Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Polyrex 005</b>	00	220	30		Polyurea	260	NSF-H1-Registration Number 141947, Kosher/Parve	FDA 21 CFR 178.3570, DIN 51826 (2005:01) GPFHC 00 K-30	
	Supreme-performance synthetic semi-fluid grease designed to improve productivity by solving high temperature lubrication problems in both general industry and food processing applications. It offers a combination of high temperature performance, excellent water resistance and balanced performance properties.								
<b>Mobil SHC Polyrex 222</b>	2	220	30		Polyurea	260	NSF-H1-Registration Number 136449, Kosher, Parve, Halal, MAG IAS, LLC P-64	DIN 51825 (2004:06) KPFHC 2 P-30, FDA 21 CFR 178.3570	
	Supreme-performance synthetic grease designed to improve productivity by solving high temperature lubrication problems in both general industry and food processing applications. It offers a combination of high temperature performance, excellent water resistance and balanced performance properties.								
<b>Mobil SHC Polyrex 462</b>	2	460	40		Polyurea	270	NSF-H1-Registration Number 139558, Kosher/Parve	DIN 51825 (2004:06) KPFHC 2 P-20, FDA 21 CFR 178.3570	Recommended by ExxonMobil for use in applications requiring
	Supreme-performance synthetic grease designed to improve productivity by solving high temperature lubrication problems in both general industry and food processing applications. It offers a combination of high temperature performance, excellent water resistance and balanced performance properties.								
<b>Mobilith SHC 007</b>	00	460			Lithium-Complex		Fives Cincinnati P-81	DIN 51826: (2005-01) GPHC 00 K-30	
	Supreme-performance synthetic semi-fluid grease designed for a wide variety of applications at extremes of temperature and operating conditions. Excellent adhesion, structural stability and resistance to water. Used in industrial, automotive and marine applications.								
<b>Mobilith SHC 100</b>	2	100			Lithium-Complex	265	AAR-942, Fives Cincinnati P-73	DIN 51825: (2004-06) KPHC 2 N-40	
	Mobilith SHC 100 is a synthetic antiwear and extreme pressure grease primarily recommended for higher speed applications such as electric motors, where reduced friction, low wear and long service life are required. It is an NLGI 2 Grade / ISO VG 100 grease with a synthetic base fluid.								
<b>Mobilith SHC 220</b>	2	220			Lithium-Complex	265		DIN 51825: (2004-06) KPHC 2 N-30	
	Mobilith SHC 220 is a multi-purpose, NLGI 2 extreme pressure grease recommended for heavy-duty automotive and industrial applications. It uses an ISO VG 220 synthetic base fluid.								
<b>Mobilith SHC 460</b>	1.5	460			Lithium-Complex	265	Fives Cincinnati P-64	DIN 51825: (2004-06) KPHC 1-2 N-40	
	Mobilith SHC 460 is an NLGI 1.5 Grade grease with ISO VG 460 synthetic base fluid and is an extreme pressure grease recommended for tough industrial and marine applications. It provides outstanding bearing protection under heavy loads at low-to-moderate speeds and in applications where water resistance is a critical factor. Mobilith SHC 460 has demonstrated outstanding performance in steel mills, paper mills and marine applications.								
<b>Mobilith SHC 1000 Special</b>	2	1000			Lithium-Complex	265		DIN 51825: (2004-06) KPFHC 2 N-30	
	Mobilith SHC 1000 Special is an NLGI 2 Grade grease with ISO VG 1000 synthetic base fluid and strongly fortified with solid lubricants including 11% graphite and 1% molybdenum disulphide for maximum protection of plain or rolling element bearings operating under boundary lubrication regimes. This product is designed to extend bearing life under conditions of extremely slow speeds, sliding contacts, and high temperatures								
<b>Mobilith SHC 1500</b>	1.5	1500			Lithium-Complex	265		DIN 51825: (2004-06) KPHC 1-2 N-30	
	Mobilith SHC 1500 is an NLGI 1.5 Grade / ISO VG 1500 grease with a synthetic base fluid. It is intended for use in plain and rolling element bearings operating at extremely slow speeds, under heavy loads and high temperatures. Mobilith SHC 1500 effective in a severe roll press application, and excellent performance in rotary kiln roller bearings and in slag transfer rail car bearings.								



Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobiltemp SHC 32</b>	1.5	32			Clay	260+		DIN 51825: (2004-06) KPHC 1-2 K-50L	
	Synthetic antiwear grease for high temperature applications. Excellent resistance to thermal/oxidative degradation with excellent structural stability at high temperature. Long service life for extended relubrication periods and energy savings potential.								
<b>Mobiltemp SHC 100</b>	2	100			Clay	260+			
	Synthetic antiwear grease for high temperature applications. Excellent resistance to thermal/oxidative degradation with excellent structural stability at high temperature. Long service life for extended relubrication periods and energy savings potential.								
<b>Mobiltemp SHC 460 Special</b>	1	460			Clay	260+			
	Synthetic antiwear grease for high temperature applications. Excellent resistance to thermal/oxidative degradation with excellent structural stability at high temperature. Long service life for extended relubrication periods and energy savings potential. Contains molybdenum disulphide.								
<b>Mobil Polyrex EM</b>	2	115	12.2		Polyurea	260		DIN 51825: (2004-06) K 2 P-20	
	Super-performance polyurea thickened grease. Recommended for electric motor bearings and sealed-for-life bearings. Higher temperature operations with optimal oil separation. Also for low noise sensitive environments.								
<b>Mobil Polyrex EM 103</b>	3	115	12.2		Polyurea	270			
	Super-performance polyurea thickened grease. Recommended for vertically mounted electric motor bearings and sealed-for-life bearings. Higher temperature operations with optimal oil separation. Also for low noise sensitive environments								
<b>Mobilgrease XHP 221</b>	1	220			Lithium-Complex	280	Fives Cincinnati P-72	DIN 51825: (2004-06) KP 1 N-20	
	Extended service lithium complex grease intended for a wide variety of applications and severe operating conditions. Designed to outperform conventional products by applying cutting edge, proprietary, lithium complex manufacturing technology.								
<b>Mobilgrease XHP 222</b>	2	220			Lithium-Complex	280	Fives Cincinnati P-64	DIN 51825: (2004-06) KP 2 N-20	
	Extra high-performance mineral oil grease for industrial, automotive, construction and marine applications. Used for severe operating conditions, including high temperature, water contamination, high loads and shock loading.								
<b>Mobilgrease XHP 322 Mine</b>	2	320			Lithium-Complex	270			
	Extra high-performance mineral oil grease for industrial, automotive, construction and marine applications. Used for severe operating conditions, including high temperature, water contamination. Contains molybdenum disulfide to give extra protection against shock loading.								
<b>Mobilgrease XHP 461</b>	1	460			Lithium-Complex	280		DIN 51825: (2004-06) KP 1 N-20L	
	Extra high-performance mineral oil grease for industrial, automotive, construction and marine applications. Used for severe operating conditions, including high temperature, water contamination, high loads and shock loading.								
<b>Unirex N 2</b>	2	115			Lithium-Complex	230		DIN 51825: (2004-06) K 2 N-20L	
	Premium-quality long-life lithium complex grease suitable for high temperature service in all types of bearings. Versatile product profile with applications in a wide range of industries but most particularly for electric motors and sealed-for-life bearings.								
<b>Unirex N 3</b>	3	115			Lithium-Complex	230		DIN 51825: (2004-06) K 3 N-20L	
	Premium-quality long-life lithium complex grease suitable for high temperature service in all types of bearings. Versatile product profile with applications in a wide range of industries but most particularly for electric motors and sealed-for-life bearings.								



## Greases

Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
Unirex EP 2	2	220			Lithium-Complex	260		NLGI GC-LB	
	Premium-quality lithium complex thickened mineral oil based grease. Excellent multipurpose grease, particularly where there may be water contamination and/or heavy-duty in service. Suitable for plain and antifriction bearings in a wide variety of industrial and automotive applications.								
Mobilux EP 004	00	160			Lithium		SEW Eurodrive/ PS C Gears	DIN 51826: (2005-01) GP 00 G-20	
	High-performance general purpose semi-fluid industrial grease. Based on mineral oils and a lithium thickener to provide extra protection against wear, rusting and water washout. Suitable for equipment where moist or wet conditions are common. Particularly suited to industrial applications where conventional gear oils cannot be retained in equipment such as gear cases, chain cases, because of leakage due to worn or missing seals								
Mobilux EP 0	0	160			Lithium	190		DIN 51826: (2005-01) GP 0 G-20	
	High-performance general purpose industrial grease. Based on mineral oils and a lithium thickener to provide extra protection against wear, rusting and water washout. Suitable for equipment where moist or wet conditions are common. Recommended for most types of industrial applications including heavy-duty.								
Mobilux EP 1	1	160			Lithium	190		DIN 51825: (2004-06) KP 1 K-20	
	High-performance general purpose industrial grease. Based on mineral oils and a lithium thickener to provide extra protection against wear, rusting and water washout. Suitable for equipment where moist or wet conditions are common. Recommended for most types of industrial applications including heavy-duty.								
Mobilux EP 2	2	160			Lithium	190		DIN 51825: (2004-06) KP 1 K-20	
	High-performance general purpose industrial grease. Based on mineral oils and a lithium thickener to provide extra protection against wear, rusting and water washout. Suitable for equipment where moist or wet conditions are common. Recommended for most types of industrial applications including heavy-duty.								
Mobilux EP 3	3	160			Lithium	190		DIN 51825: (2004-06) KP 1 K-20	
	High-performance general purpose industrial grease. Based on mineral oils and a lithium thickener to provide extra protection against wear, rusting and water washout. Suitable for equipment where moist or wet conditions are common. Recommended for most types of industrial applications including heavy-duty.								
Mobil SHC Grease 102 EAL	2	100			Lithium	180		DIN 51825: (2004-06) KPE 1 K-40	
	Superior-performance grease designed specifically for applications that require environmentally sensitive lubricants. High-performance grease, biodegradable and virtually non-toxic.								
Mobil Centaur XHP 221	1.5	220			Calcium Sulfonate Complex	318		DIN 51825: (2004-06) KP 1-2 G-20	
	Multipurpose Calcium Sulphonate Complex Grease, formulated with advanced calcium sulfonate thickener technology. The calcium sulfonate thickener carries both inherent rust protection and extreme pressure (EP) properties. The inherent EP properties exhibit great stability in the presence of water, allowing a balance between wear protection and resistance to corrosion.								
Mobil Centaur XHP 461	1.5	460			Calcium Sulfonate Complex	275		DIN 51825: (2004-06) KPF 1 K-20	
	Multipurpose Calcium Sulphonate Complex Grease, formulated with advanced calcium sulfonate thickener technology. The calcium sulfonate thickener carries both inherent rust protection and extreme pressure (EP) properties. The inherent EP properties exhibit great stability in the presence of water, allowing a balance between wear protection and resistance to corrosion.								



Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C				Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgrease Special</b>	2	150			Lithium	190			DIN 51825: (2004-06) KPF2K-20
	Extreme pressure lithium thickened grease. Contains molybdenum disulphide to give extra protection in heavily loaded bearings. Wheel bearings and chassis components in automotive and industrial equipment, passenger cars, trucks, farm tractors, construction and mobile equipment.								



## Specialty Products

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilsol PM</b>		383	21	56	0.885		208			
	Highly detergent and dispersant synthetic fluid which, when added to the oil in hydraulic, paper machine or general circulation systems, will help to release and hold in suspension gummy oil oxidation products and insoluble materials.									
<b>Mobil Pyrolube 830</b>		180	20,4	132	0.93	-46	270			
	Synthetic fluid for lubrication of heavily loaded chains. Especially suitable for hot applications in ovens and kilns up to chain temperatures of 230°C. Excellent oxidation stability and low tendency of deposit formation.									
<b>Mobil SHC Chain 240</b>		245	19	86	0.968	-24	290			
	Chain lubricant with exceptional performance designed for lubrication of high temperature conveyor chains at temperatures up to 290°C. Provides excellent wear protection and resistance to evaporation, thermo-oxidation and coking.									
<b>Mobil Clean Industrial</b>					0.762		>56			
	Solvent based cleaning fluid									



Brand name	SAE-Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	TBN mg KOH/g	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgard 312</b>	30	108	12	100	0.896	-9	15			
								High-performance marine diesel engine oil developed for use in trunk piston engines operating on low sulphur distillate fuels in marine and industrial applications. Formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. Superior water separating properties and excellent corrosion protection.		
<b>Mobilgard 412</b>	40	142	14.5	100	0.899	-9	15			
								High-performance marine diesel engine oil developed for use in trunk piston engines operating on low sulphur distillate fuels in marine and industrial applications. Formulated to have excellent resistance to oxidation and viscosity increase over a long period of service. Superior water separating properties and excellent corrosion protection.		
<b>Mobilgard ADL 30</b>	30	90	11.5	117	0.889	-30	12		Meets the requirements of many major medium-speed marine diesel engine builders	API CF
								High-performance marine engine oil with increased dispersancy for high BMEP medium and high-speed diesel engines operating on distillate and MDO fuels. Special balance of detergent and dispersant properties provides not only increased resistance to cylinder liner lacquer formation in severe service applications but also minimises piston ring and liner wear and assists in sludge and deposit removal, overall engine cleanliness and can increase time between engine overhauls. Suitable for marine gearing applications.		
<b>Mobilgard ADL 40</b>	40	132	14.7	112	0.892	-21	12		Meets the requirements of many major medium-speed marine diesel engine builders	API CF
								High-performance marine engine oil with increased dispersancy for high BMEP medium and high-speed diesel engines operating on distillate and MDO fuels. Special balance of detergent and dispersant properties provides not only increased resistance to cylinder liner lacquer formation in severe service applications but also minimises piston ring and liner wear and assists in sludge and deposit removal, overall engine cleanliness and can increase time between engine overhauls. Suitable for marine gearing applications.		
<b>Mobilgard M330</b>	30		12		0.907	-6	30			
								Premium, extra high-performance 30 TBN trunk piston engine oil for use in the most severe residual-fueled, medium-speed diesel engines for marine and stationary power applications. Outstanding residual fuel compatibility to deliver excellent engine cleanliness, especially in crankcase, camshaft areas, ring belt and piston undercrowns. Provides excellent high temperature oxidation and thermal stability, low volatility, high load-carrying properties and corrosion protection.		
<b>Mobilgard M430</b>	40		14		0.907	-6	30			
								Premium, extra high-performance 30 TBN trunk piston engine oil for use in the most severe residual-fueled, medium-speed diesel engines for marine and stationary power applications. Outstanding residual fuel compatibility to deliver excellent engine cleanliness, especially in crankcase, camshaft areas, ring belt and piston undercrowns. Provides excellent high temperature oxidation and thermal stability, low volatility, high load-carrying properties and corrosion protection.		
<b>Mobilgard M440</b>	40		14		0.915	-6	40			
								Premium, extra high-performance 40 TBN marine engine oil designed to meet the needs of engines operating on heavy fuel. Recommended for use in the latest model medium speed diesel engines and especially beneficial in engines having low crankcase oil consumption or operating with low cylinder liner temperatures. Relatively high alkalinity reserves provide superior protection in neutralising the strong acids resulting from high sulphur fuels that find access to the crankcase to promote oil degradation and ring, cylinder, and bearing corrosion. Demonstrates excellent high temperature oxidation and thermal stability, low volatility, and high load carrying properties along with engine cleanliness.		





## Aviation Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Jet Oil II</b>		27.6	5.1		1.00355	-59	270	MIL-PRF-23699F-STD		
	High-performance aircraft-type gas turbine lubricant formulated with a combination of a highly stable synthetic base fluid and a unique chemical additive package. The combination provides outstanding thermal and oxidative stability to resist deterioration and deposit formation in both the liquid and vapour phases, as well as excellent resistance to foaming.									
<b>Mobil Jet Oil 254</b>		26.4	5.3		1.0044	-62	254	MIL-PRF-23699F-HTS		
	Third-generation, extra high-performance, synthetic aircraft-type gas turbine lubricant engineered to meet the performance requirements for gas turbine engines used in commercial and military aircraft.									
<b>Mobil Aero HF</b>		14	5.2	370	0.872	-62	107	MIL-PRF-5606, NATO Code H-515		
	Formulated for aircraft systems where use of hydrocarbon-based hydraulic fluids is required. Low viscosity product, high VI fluid with excellent low temperature properties, good anti-wear performance, and good chemical stability.									



Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		ISO VG	Viscosity Index	Thickener Type	Dropping Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilgrease 28</b>	1.5	30				Clay	307	MIL-PRF-81322G, NATO G-395		DOD-G-24508A, Amendment 4
	Supreme-performance, wide-temperature, antiwear grease designed to combine the unique features of a polyalphaolefin (PAO) synthetic base fluid with an organo-clay (non-soap) thickener. Provides excellent low temperature pumpability, very low starting and running torque, and can reduce operating temperatures in the load zone of rolling element bearings.									



## Rolling Oils and Rolling Oil Additive Concentrates

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Airclean Oil</b>		30.8	5.38		0.863	-15	>220			
Oil for removal of SOLVENT-based cold rolling oil from exhaust air of roll stands.										
<b>Mobil Clean Industrial</b>		1,2 (at 25°C)			0.765	<-50	58		FDA	
Low viscosity, easy to evaporate hydrocarbon blend, specially used for the laminate / double process during aluminum rolling. Also suitable as halogen-free degreasing agent.										
<b>Somentor 44</b>		4.2			0.83	-6	120			
Cold rolling oil for stainless steels, copper and other metals. Easy filtration, suitable for Supamic Filtration. Adjustable for use on various mill configurations. Bright surface finish on rolled metal, good oxidation stability.										
<b>Somentor 53</b>		7.2			0.845	-21	160			
Cold rolling oil for stainless steels, copper and other metals. Easy filtration, suitable for Supamic Filtration. Adjustable for use on various mill configurations. Alcohol technology.										
<b>Somentor AL70</b>		7.2			0.85	-6	160			
Premium-quality, fully compounded cold rolling oil for ferrous and non-ferrous metals. Easy filtration, suitable for Supamic Filtration. Bright surface finish on rolled metal, adjustable for use on various mill configurations, including rod mills. Alcohol technology, medium operating efficiency.										
<b>Somentor AH70</b>		7.3			0.852	-6	152			
Premium-quality, fully compounded cold rolling oil for ferrous and non-ferrous metals. Easy filtration, suitable for Supamic Filtration. Bright surface finish on rolled metal, adjustable for use on various mill configurations. Alcohol technology, higher operating efficiency as compared to Somentor AL70.										
<b>Somentor AH45</b>		4.2			0.822	-6	140			
Premium-quality, fully compounded cold rolling oil for ferrous and non-ferrous metals. Easy filtration, suitable for Supamic Filtration. Bright surface finish on rolled metal, adjustable for use on various mill configurations. Alcohol technology, high operating efficiency at low viscosity.										
<b>Somentor EL70</b>		7.3			0.851	-21	158			
Premium-quality fully compounded cold rolling oil for both ferrous and non-ferrous metals. Easy filtration, suitable for Supamic Filtration. Bright surface finish on rolled metal, even at demanding cold rolling operations. Adjustable for use on various mill configurations. Ester technology, high operating efficiency.										
<b>Somentor EL45</b>		4.2			0.823	-12	142			
Premium-quality fully compounded cold rolling oil for both ferrous and non-ferrous metals. Easy filtration, suitable for Supamic Filtration. Bright surface finish on rolled metal, even at demanding cold rolling operations. Adjustable for use on various mill configurations. Ester technology, high operating efficiency at low viscosity.										
<b>Somentor EH70</b>		7.5			0.857	-27	158			
Premium-quality fully compounded cold rolling oil for both ferrous and non-ferrous metals. Easy filtration. Bright surface finish on rolled metal, even at demanding cold rolling operations. Adjustable for use on various mill configurations. Ester technology, very high operating efficiency.										
<b>Somentor EH45</b>		4.2			0.83	-15	136			
Premium-quality fully compounded cold rolling oil for both ferrous and non-ferrous metals. Easy filtration. Bright surface finish on rolled metal, even at demanding cold rolling operations. Adjustable for use on various mill configurations. Ester technology, very high operating efficiency at low viscosity.										
<b>Somentor EH80</b>		8.5	2.4		0.86	-27	150			
Premium-quality fully compounded cold rolling oil for both ferrous and non-ferrous metals. Easy filtration. Bright surface finish on rolled metal, even at demanding cold rolling operations. Adjustable for use on various mill configurations. Ester technology, very high operating efficiency, even for extreme forming operations and for extreme hard metals.										
<b>Walzöl BM 71</b>		7			0.845	-18	155			
Cold rolling oil for stainless steel, copper and other metals. Specially suited for forming of non-ferrous heavy metals, no staining. Easy filtration, adjustable for use on various mill configurations.										
<b>Walzöl W 27</b>		2				-6	92		FDA	
Cold rolling oil for aluminum and soft alloys. Excellent filterability, good evaporation tendency. Adjustable to the rolling mill. Individual usable for a variety of applications, also as evaporation fluid.										
<b>Wyrol 2</b>		2.2			0.83	18	93		FDA 21 CFR 178.3910(a)	
Liquid oxidation inhibitor concentrate, used to extend the life of the rolling oil.										
<b>Wyrol 4</b>		2.5			0.795	24	93		FDA 21 CFR 178.3910(a)	
Rolling oil concentrate used to optimise the properties of aluminium roll oils in terms of their frictional characteristics and achieve the required surface finish.										







Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Wyrol 6</b>		2.3			0.858	-3	111		FDA 21 CFR 178.3910(a)	
		Rolling oil concentrate used to optimise the properties of aluminium roll oils in terms of their frictional characteristics and achieve the required surface finish. Suitable for special lubrication applications.								
<b>Wyrol 8</b>		8			0.83	18	110		FDA 21 CFR 178.3910(a)	
		Rolling oil concentrate used to optimise the properties of aluminium roll oils in terms of their frictional characteristics and achieve the required surface finish. Suitable for special lubrication applications.								
<b>Wyrol 10</b>		2.8			0.84	6	80		FDA 21 CFR 178.3910(a)	
		Rolling oil concentrate used to optimise rolling oil life and performance in aluminium cold rolling mill applications. Suitable for special lubrication requirements.								
<b>Wyrol 12</b>		8.2			0.835	18	105		FDA 21 CFR 178.3910(a)	
		Rolling oil concentrate used to optimise rolling oil life and performance in aluminium cold rolling mill applications. Suitable for special lubrication requirements.								
<b>Wyrol 15</b>		9.3			0.846	9	154			
		Rolling oil concentrate to optimise the rolling process during rolling of stainless steel with Somentor A products.								
<b>Concentrate 3048</b>		11			0.925	<-24	170			
		Rolling oil concentrate used to optimise the rolling process during rolling of stainless steel with Somentor A and E products. Individually applied to improve operating efficiency and surface finish.								
<b>Wyrol HS 22</b>		22			0.868	-51	160			
		Premium synthetic, low staining, antiwear hydraulic fluid, specifically designed for use in modern aluminium rolling mills, where gums can form challenges in foil rolling and seperation.								
<b>Wyrol HS 46</b>		44			0.87	-42	175			
		Premium synthetic, low staining, antiwear hydraulic fluid, specifically designed for use in modern aluminium rolling mills, where gums can form challenges in foil rolling and seperation.								
<b>Wyrol H 15</b>		15			0.84	-18	130		FDA 21 CFR 178.3910(a)	
		Premium synthetic, low staining, antiwear hydraulic fluid, specifically designed for use in modern aluminium rolling mills, where gums can form challenges in foil rolling and seperation.								
<b>Wyrol H 32</b>		32			0.85	-18	130		FDA 21 CFR 178.3910(a)	
		Semi-synthetic, low staining, antiwear hydraulic fluid, specifically designed for use in modern aluminium or yellow metal rolling mills.								
<b>Wyrol B 460</b>		460		160		-12	130		FDA 21 CFR 178.3910(a)	
		Semi-synthetic, low staining bearing-/circulating oil specially designed for aluminium cold rolling mills.								
<b>Wyrol BG 220</b>		235	32		1.01	-30	275			
		High-performance, synthetic low staining bearing and gear oil for rolling mills. Specifically designed to overcome the problems generated when conventional bearing lubricating oils contaminate the roll oil.								
<b>Wyrol BG 320</b>		320	45		1.01	-30	275			
		High-performance, synthetic low staining bearing and gear oil for rolling mills. Specifically designed to overcome the problems generated when conventional bearing lubricating oils contaminate the roll oil.								
<b>Wyrol BG 460</b>		460	63		1.01	-27	275			
		High-performance, synthetic low staining bearing and gear oil for rolling mills. Specifically designed to overcome the problems generated when conventional bearing lubricating oils contaminate the roll oil.								
<b>Wyrol MS 220</b>		220			0.86	-21	140			
		Synthetic, low staining bearing oil for oil/air or oil/mist lubrication specially for modern aluminum rolling mills.								
<b>Wyrol MS 460</b>		460			0.87	-21	140			
		Synthetic, low staining bearing oil for oil/air or oil/mist lubrication specially for modern aluminum rolling mills.								
<b>Prosol 35</b>		56			0.944		>150			
		Concentrate for blending emulsions for hot rolling of aluminum as well as for cold rolling of ferrous alloys. Biocide-free.								
<b>Prosol 44 W</b>		35			0.92		>160			
		Concentrate for blending emulsions for hot rolling of aluminum as well as for cold rolling of ferrous alloys. Extreme application range, high lubricity and high stability. Biocide-free.								
<b>Prosol NT70</b>		42			0.9	-9	190			
		Concentrate for blending emulsions for hot rolling of aluminum and yellow metals as well as for cold rolling and grinding of ferrous alloys. Containing Biocide.								



## Spindle Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Velocite Oil No. 3</b>	2	2.1	0.95		0.80	-36	84			
	Premium-performance oil for the lubrication of high-speed spindles in machine tools. Good oxidation and thermal resistance. Good resistance to foaming and readily separates from water.									
<b>Mobil Velocite Oil No. 4</b>	5	4.8	1.5		0.82	-15	102			
	Premium-performance oil for the lubrication of high-speed spindles in machine tools. Good oxidation and thermal resistance. Good resistance to foaming and readily separates from water.									
<b>Mobil Velocite Oil No. 6</b>	10	10	2.6		0.84	-15	180			
	Premium-performance oil for the lubrication of high-speed spindles in machine tools. Good oxidation and thermal resistance. Good resistance to foaming and readily separates from water.									
<b>Mobil Velocite Oil No. 10</b>	22	22	4.0		0.86	-30	212			
	Premium-performance oil for the lubrication of high-speed spindles in machine tools. Good oxidation and thermal resistance. Good resistance to foaming and readily separates from water.									







Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Gear 320 WT</b>	320	335	42.1	187	0.854	-45	256		AGMA 9005-E02 DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD	
	Advanced wind turbine gear lubricant. Synthetic industrial gear lubricant designed to provide optimum equipment protection of wind turbine gearboxes and lubricant life even under extreme conditions. Especially recommended for applications that may be subject to micropitting, heavily loaded gearboxes with surface-hardened tooth metallurgies, which are typically used in wind turbines. For gear applications where extreme low and/or high temperatures are encountered and applications where corrosion may be severe. Non toxic to aquatic life as per IMO 493/02.									
<b>Mobilgear SHC XMP 320</b>	320	335	38.3	164	0.86	-38	242		AGMA 9005-E02 EP, DIN 51517-3, 2009-06	
	Synthetic high-performance gear oil for wind turbine gearboxes. Optimal equipment protection and optimal oil life even under extreme conditions. Extraordinary thermal and oxidation stability, inherent high viscosity index, excellent flowability at low temperatures. Recommended for applications that may be subject to micropitting. For extreme low and/or high temperatures and applications subject to corrosion.									
<b>Mobilgear XMP 320</b> 	320	320	24.1	96	0.9	-18	268	Hansen Jahnel-Kestermann	AGMA 9005-EO2 EP, ISO L-CKC, (ISO 12925-1, 1996)	
	High-performance gear oil for extreme conditions. Recommended for highly loaded wind turbine gearboxes. For applications that may be subject to micropitting.									
<b>Mobil SHC 524</b>	32	32	6.4	144	0.85	-56	234	Denison HF-0, Denison HF-1, Denison HF-2		
	Zinc-containing synthetic high-performance antiwear hydraulic oil for hydraulic pitching of wind turbine rotor blades. Very high VI for excellent low and high temperature performance. Maximum antiwear protection for vane and piston pumps. Wide range of operating temperatures and shear stable.									
<b>Mobil DTE 10 Excel 32</b> 	32	327	6.6	164	0.85	-54	250	Denison HF-O, Eaton Vickers 694 (encompasses former I-286-S, M-2950-S or M-2952-S) Denison HF-2	DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV, JCMAS HK, Bosch-Rexroth RE 90220-1	
	Zinc- and silikon-free high-performance antiwear hydraulic oil. Meets the requirements of modern high-pressure hydraulic systems in wind turbines such as for hydraulic pitching of wind turbine rotor blades. Potentially reduced energy consumption. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. (FZG fail stage = 12)									
<b>Mobil DTE 10 Excel 46</b> 	46	456	8.5	164	0.85	-45	232	Arburg Hydraulic fluid Denison HF-O, Eaton Vickers 694 (encompasses former I-286-S, M-2950-S or M-2952-S)	DIN 51524-2: 2006-09, DIN 51524-3: 2006-09, ISO 11158 L-HV, JCMAS HK VG46W (JCMAS P 041:2004), Bosch- Rexroth RE 90220-1, Krauss-Maffei hydraulic Oil	
	Zinc- and silikon-free high-performance antiwear hydraulic oil specifically designed to meet the needs of modern, high pressure, industrial and mobile equipment hydraulic systems. Innovative ultra keep clean performance protects critical hydraulic system components from malfunction. Potentially reduced energy consumption.									
<b>Mobil SHC Gear 220</b> 		22000	700	180	0.86	6	240			
	Supreme-performance, synthetic gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. For pitch- and yaw (Azimut)-gearboxes of wind turbines.									

\* The energy efficiency design is a trademark of Exxon Mobil Corporation. Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade in gear applications. The technology used allows up to 3.6% efficiency compared with the reference when tested in a worm gearbox under controlled conditions. Efficiency improvements will vary based on operating conditions and applications.

\*\* Energy efficiency relates solely to the fluid performance when compared to ExxonMobil's standard hydraulic fluids. The technology used allows up to 6% increase in hydraulic pump efficiency compared to Mobil DTE 20 series when tested in standard hydraulic applications. The energy efficiency claim for this product is based on test results on the use of the fluid conducted in accordance with all applicable industry standards and protocols. In case of queries, please consult TechDeskEurope@exxonmobil.com



# Windturbine Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil SHC Gear 460</b> 	460	460	54.1	184	0.86	-48	234	SIEMENS AG Flender gear units, T 7300, Table A-c, Flender Code No. A33, SEW Eurodrive SEW IG CLP HC 460	AGMA 9005-E02 EP DIN 51517, Teil 3 (CLP), ISO 12925-1 Typ CKD	
Supreme-performance, synthetic gear oil designed to provide optimum equipment protection and oil life even under extreme conditions. Designed to provide excellent protection against conventional wear modes such as scuffing but also provides a high level of resistance against micropitting fatigue. For pitch- and yaw (Azimut)-gearboxes of wind turbines.										
<b>Mobil SHC 629</b> 	150	150	21.1	166	0.86	-42	220	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A36. SEW Eurodrive: SEW IG CLP HC 150, SEW SG CLP HC 150. MAG IAS, LLC P-77	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. Designed for use in hot and cold conditions. Excellent thermal and oxidation stability for long service life. For use in pitch- and yaw (Azimut)-gearboxes of wind turbines.										
<b>Mobil SHC 630</b> 	220	220	28.5	169	0.87	-42	220	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A35. DESCH ZG 30 gear unit SEW Eurodrive: SEW IG CLP HC 220 & SEW SG CLP HC 220.	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. Designed for use in hot and cold conditions. Excellent thermal and oxidation stability for long service life. For use in pitch- and yaw (Azimut)-gearboxes of wind turbines.										
<b>Mobil SHC 632</b> 	320	320	38.5	172	0.87	-42	225	SIEMENS AG Flender gear units, T 7300, Table A-c, Code No. A34. SEW Eurodrive: SEW IG CLP HC 320 MAG IAS, LLC P-59	AGMA 9005 EO2-EP DIN 51517-3 CLP, ISO 12925-1 CKD	
Synthetic gear and bearing lubricant. Designed for use in hot and cold conditions. Excellent thermal and oxidation stability for long service life. For use in pitch- and yaw (Azimut)-gearboxes of wind turbines.										

\* The energy efficiency design is a trademark of Exxon Mobil Corporation. Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade in gear applications. The technology used allows up to 3.6% efficiency compared with the reference when tested in a worm gearbox under controlled conditions. Efficiency improvements will vary based on operating conditions and applications.

\*\* Energy efficiency relates solely to the fluid performance when compared with conventional reference oils of the same viscosity grade in gear applications. The technology used allows up to 3.6% efficiency compared with the reference when tested in circulating and gear applications under controlled conditions. Efficiency improvements will vary based on operating conditions and applications.



Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		ISO VG	Viscosity Index	Thickener Type	Dropping Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilith SHC 100</b>	2	100				Lithium-Complex	265	AAR-942, Fives Cincinnati P-73	DIN 51825: (2004-06) KPHC 2 N-40	
	Supreme-performance synthetic grease designed for a wide variety of applications at extremes of temperature and operating conditions. Excellent adhesion, structural stability and resistance to water. Specially formulated to lubricate generator bearings of wind turbines and to provide extended service life.									
<b>Mobil SHC Grease 460 WT</b>	1.5	460				Lithium-Complex	255		DIN 51825: (2004-06) KPHC 2 N-30	
	Supreme-performance grease especially suited to exceed the demanding requirements of wind turbine applications at extremes of temperature. Specially formulated to lubricate yaw, pitch and main bearings of wind turbines and to provide extended service life.									
<b>Mobilith SHC 007</b>	00	460				Lithium-Complex		Fives Cincinnati P-81	DIN 51826: (2005-01) GPHC 00 K-30	
	Supreme-performance synthetic semi-fluid grease designed for a wide variety of wind turbine applications at extremes of temperature and operating conditions. Excellent adhesion, structural stability and resistance to water. For industrial, automotive and marine applications.									
<b>Mobilgear OGL 007</b>	00-0	460				Lithium	200			
	High-performance semi-fluid grease that contains EP additives and finely dispersed graphite. Designed for slow moving open gears in wind turbines. Suitable for spray application.									
<b>Mobilgear OGL 461</b>	1.5	460				Lithium	200			
	High-performance grease that contains EP additives and finely dispersed graphite. Designed for slow moving open gears in wind turbines. Suitable for spray application.									



## Automotive Gear Oils

Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilfluid 125</b>	32	30	5.3	104	0.88	-30	225	Voith Turbo Transmissions 120.00059010		
	Extra high-performance power transmission fluid that is formulated for use in hydrodynamic gears and hydraulic systems typically found in railroad, marine, construction, and industrial applications.									
<b>Mobilfluid 422</b>	SAE 10W-30	85	10.8	110	0.89	-30	226			Ford New Holland ESN-M2C86-B
	Extra high-performance, multipurpose tractor lubricant engineered to meet or exceed transmission and hydraulic fluid requirements.									
<b>Mobilfluid 424</b>		55	9.3	145	0.88	-42	198		Kubota UDT, ASTM D6973 (Eaton 35VQ) high pressure vane pump test	API GL-4, Allison C-4 (Agriculture Applications Only), Caterpillar TO-2, CNH MAT 3505/3525, Ford New Holland ESN-M2C-134-D, Ford New Holland FNHA-2C-201.00, JI Case MS 1204-07/09, Massey Ferguson M-1135, M-1141, AGCO Powerfluid 821 XL, John Deere J20C, Denison UTTO/THF
	Extra high-performance, multipurpose tractor lubricant engineered to meet or exceed transmission and hydraulic fluid requirements.									
<b>Mobilfluid 426</b>		59	9.7	149	0.89	-39	228	ZF TE-ML 03E/05F/06K/17E/21F	Kubota UDT, ASTM D6973 (Eaton 35VQ) high pressure vane pump test	API GL-4, AGCO Powerfluid 821 XL, Allison C-4 (Agriculture Applications Only), Caterpillar TO-2, CNH MAT 3505/3525, Ford New Holland FNHA-2-C-201.00, Ford ESN-M2C134-D, J. I. Case MS 1204-07/09, John Deere J20C, Massey Ferguson MF M-1135/ M-1141/M-1143/ M-1145, Denison UTTO/THF, VOLVO WB-101
	Extra high-performance multipurpose tractor lubricant engineered to meet or exceed transmission and hydraulic fluid requirements.									



Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilfluid 316M</b>		53.1	10.0	179	0.877	-42	218			Mobilfluid 316M is suitable for use in many hydraulic pumps in: Poclain Hydraulics, Mecalac, Kubota, Sambron, Manitou, Linde Hydraulics
	High-performance hydraulic oil for a wide range of hydraulic and hydrostatic systems used in on- and off-highway industries including: trucking, construction, mining, quarrying, and agriculture. Blue color helps to avoid accidental mix with other type of oils.									
<b>Mobilfluid LT</b>	SAE 75W-80	34	7.2	180	0.875	-45	198			Caterpillar TO-2, Denison UTTO/THF, Deere J20D, ASTM D6973 (Eaton 35VQ) high pressure vane pump test
	Extra high-performance multipurpose tractor lubricant engineered to meet or exceed tractor transmission, drivetrain, and hydraulic fluid requirements. Delivers exceptional performance in today's drivetrain transmissions, drive axles, clutches, Power Take-Offs (PTO) and hydraulic systems and especially in low ambient temperature conditions.									



## Automotive Gear Oils

Brand name	SAE-Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	TBN mg KOH/g	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobilube 1 SHC</b>	75W-90	102	15.1	156	0.870	-54	202	MAN 341 Typ E3 / Z2, MAN 342 Typ M3, MB-Approval 235.8, ZF TE-ML 02B/05B/12L/16F/17B/19C/21B, SAE J2360, JSC Avtodisel YaMZ Gearboxes, KOMATSU Part 195-32-61990-04	API GL-5/MT-1, Scania STO 1:0, ZF TE-ML 07A/08	API GL-4
								Synthetic, high-performance commercial gear lubricant formulated using synthetic base oils and the latest technology additive system. Engineered for heavy-duty manual transmissions and rear axles where operations require gear lubricants with excellent load-carrying capability over wide operating temperatures and where extreme pressures and shock loading are expected. Excellent thermal and oxidation stability, high inherent Viscosity Index (VI), extremely low pour point, and outstanding low temperature fluidity.		
<b>Mobilube S</b>	80W-90	144	15.0	105	0.90	-30	210	MAN 341 Typ E2/Z2, MAN 342 Typ M2, MB-Approval 235.0, ZF TE-ML 02B/05A/12L/12M/16B/17B/19B/21A, MACK GO-J	API GL-5 / MT-1, Scania STO 1:0, ZF TE-ML 07A/08, ISUZU Axle Oil/ Large Manual Transmission Oil	API GL-4, Meritor O-76-D, MIL-PRF-2105E
								Extra high-performance drivetrain lubricant engineered to provide excellent lubrication for state-of-the-art, heavy-duty manual transmission components used in on-highway commercial vehicles and cars. Potential benefits include excellent shifting performance, good low temperature fluidity, and high temperature viscosity retention.		
<b>Mobil Delvac 1 Gear Oil</b>	75W-90	120	15.9	140	0.860	-48	205	MB-Approval 235.8, MAN 342 Typ M2, SCANIA STO 2:0 A, Voith Turbo 132.00374401/2, ZF TE-ML 05B/12L/12N/16F/17B/19C/21B, Flender Railway Gears T 7302, Volvo 97312, SAE J2360, Dana SHAES 256 Rev C/429, Navistar MPAPS B-6821, Mack GO-J Plus, Hyundai Dymos P110SS AXLE – Low Floor Rear Axle, Detroit Fluids Specification 93K219.01	API GL-5/MT-1, Scania STO 1:0, ZF TE-ML 07A/08, ISUZU Axle Oil/LCV Front Axle Oil/Large Manual Transmission Oil, Meritor O-76-N	Eaton PS 163, MIL-PFR-2105E
								Synthetic drivetrain lubricant engineered for use in heavy-duty drivetrains that require gear lubricants with relatively high viscosity and excellent load-carrying capability and where extreme pressures and shock loading are expected. Formulated with synthetic basestocks and advanced additives the product provides significant advantages over mineral gear oils. Excellent performance for wide temperature range application, helps to protect against thermal degradation and oxidation and contributes to reduced wear and corrosion, improved shear stability and fuel economy.		
<b>Mobilube HD-A</b>	85W-90	184	17.0	99	0.9	-24	222	MB-Approval 235.0, MAN 342 Typ M1, ZF TE-ML 16C/17B/19B/21A	API GL-5, ZF TE-ML 07A	
								Heavy-duty gear lubricant formulated from high-performance base oils and an advanced additive system. Engineered for commercial transmissions, axles, and final drives where extreme pressures and shock loading are expected. Recommended for on-highway cars, light trucks and heavy-duty commercial vehicles as well as for off-highway industries including construction, mining, quarrying, and agriculture.		



Brand name	ISO VG	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	Flash Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
Mobilube LS	85W-90	153	15.3	100	0.9	-36	216	ZF TE-ML 05C/12C/ 16E/21C	API GL-5	
	Extra high-performance, automotive gear lubricant formulated specifically for limited-slip differentials. Recommended for use in applications requiring API GL-5 performance such as heavy-duty differentials, axles, and final drives where extreme pressures and shock loading are expected. Applications include passenger cars, on-highway light and heavy-duty trucks, busses and vans as well as off-highway industries including construction, quarrying, and agriculture.									
Mobilube GX-A	80W	76	10.0	104	0.89	-30	216	MB-Approval 235.1, MAN 341 Typ E1/Z2, ZF TE-ML 17A	ZF TE-ML 08	API GL-4, MAN 341 Typ Z1
	Automotive gear lubricant engineered for commercial transmissions, axles, and final drives where protection against wear and scoring is required. Recommended for manual transmissions and drive axles requiring API GL-4 level, passenger cars, on-highway light- and heavy-duty trucks and commercial vehicles as well as for off-highway industries including construction, quarrying, and agriculture.									
Mobilube HD	80W-90	136	14.5	105	0.9	-30	202		API GL-5, ISUZU Axle Oil	
	Heavy-duty gear lubricant engineered for automotive applications including heavy-duty axles and final drives where extreme pressures and shock loading are expected. Recommended for passenger cars, on-highway light and heavy-duty trucks and commercial vehicles, off-highway industries including construction, mining, quarrying, and agriculture.									
Mobilube HD	85W-140	328	25.3	97	0.91	-18	224		API GL-5	
	Heavy-duty gear lubricant engineered for automotive applications including heavy-duty axles and final drives where extreme pressures and shock loading are expected. Recommended for passenger cars, on-highway light and heavy-duty trucks and commercial vehicles, off-highway industries including construction, mining, quarrying, and agriculture.									



## Automotive Greases

Brand name	NLGI Grade	Kinematic Viscosity mm <sup>2</sup> /s		ISO VG	Viscosity Index	Thickener Type	Drop- ping Point °C	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Chassis Grease LBZ</b>	00	40				Lithium	>160	MB-Approval 264.0, MAN 283 Li-P 00/000		
	<i>Semi-fluid grease, designed for the central lubrication systems of commercial vehicles. Excellent flow properties at low temperatures in long pipelines.</i>									
<b>Mobilgrease MB 2</b>	2	180				Lithium	>190	MB-Approval 267.0, MAN 283 Li-P 2	DIN 51825: (2004-06) KP 2 K-30	
	<i>Lithium thickened grease for multi purpose applications in commercial and passenger vehicle cars. Excellent oxidation stability, very good water resistance, excellent corrosion protection and good flow properties even at low temperatures. Single multi purpose grease in fleets, agricultural and construction equipment where Mercedes Benz, page 267 specification has been recommended.</i>									





Brand name	SAE-Grade	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	TBN mg KOH/g	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Delvac 1 LE</b>	5W-30	69	11.8	168	0.855	-45	10	MB-Approval 228.51/228.31/235.28, MAN M 3677/M 3477/ M 3271-1, Volvo VDS-4/VDS-3, MTU Category 3.1, DEUTZ DQC IV-10 LA, Detroit Fluid Specification 93K218, Mack EO-O Premium Plus, Renault Truck RLD-3/RLD-2, Voith Retarder Oil Class B, Scania Low Ash, Avtodiesel YaMZ-6-12	ACEA E9/E7/E6, API CJ-4/CI-4 Plus/CI-4/SN, JASO DH-2, DAF Extended Drain, Cat ECF-3, Cummins CES 20081, Ford WSS-M2C171-E	Renault Truck RXD/RGD
	Synthetic, heavy-duty diesel engine oil. Combines advanced engine protection for modern low emissions vehicles with enhanced fuel economy potential and other sustainability-related benefits such as engine durability, emissions system protection and extended drain capability.									
<b>Mobil Delvac 1</b>	5W-40	102	14.8	151	0.854	-45	12	MB-Approval 228.5/235.28, Volvo VDS-3/VDS-2, Scania LDF, Detroit Fluid Specification 93K214, Mack EO-N Premium Plus 03/EO-M Plus, Voith Retarder Oil Class B	ACEA E7/E4, API CI-4 Plus/CI-4/CH-4/SL/SJ, Cummins CES 20078/77/76/75, Ford WSS-M2C171-D, Renault Truck RXD, JASO DH-1, Global DHD-1	API CG-4/CF-4/CF, Cat ECF-1-a, Cummins 20072/71
	Synthetic, high-performance heavy-duty diesel engine oil with fuel saving potential. Helps towards long engine life while providing long drain capability for modern diesel engines operating in severe applications, delivers excellent performance in modern low emission engines, including refrigerated units, as well as older, well-maintained engines.									
<b>Mobil Delvac 1 SHC</b>	5W-40	84	14.2	176	0.86	-45	16	MB-Approval 228.5, MAN M 3277, MTU Category 3.1	ACEA E4	API CF/CE, Volvo VDS-2
	Synthetic, very high-performance diesel engine oil with fuel saving potential. Provides excellent lubrication including long drain capability, helping towards long engine life for diesel engines operating in severe applications. The advanced technology behind this product delivers exceptional performance in turbo-charged as well as older naturally aspirated engines.									
<b>Mobil Delvac XHP Ultra</b>	5W-30	69.7	11.8	166	0.856	-45	15.9	MB-Approval 228.5, MAN M 3277, MTU Category 3.1	ACEA E4	
	Extra high-performance diesel engine oil engineered to provide outstanding protection and fuel economy for modern heavy-duty diesel engines used in severe on highway applications.									
<b>Mobil Delvac XHP Ultra LE</b>	5W-30	69.4	11.9	169	0.85		10.9	MB-Approval 228.5/235.28, MAN M 3477, Voith Retarder Oil Class B		
	Extra high-performance diesel engine oil engineered to provide outstanding protection and fuel economy potential in modern, high-performance, low emissions engines used in severe on-highway applications, specifically designed to meet the latest MB-Approval 228.51 & MAN M 3477 requirements for modern diesel engines.									
<b>Mobil Delvac XHP Extra</b>	10W-40	89.0	13.0	151	0.87	-42	15.9	MB-Approval 228.5/235.27, MAN M 3277, Volvo VDS-3/VDS-2, MTU Category 3, Scania LDF-3, ZF TE-ML 04C, Voith Retarder Oil Class A	ACEA E7/E4, Renault Truck RXD	API CF, Cummins CES 20072, Scania LDF-2
	Heavy-duty engine oil that provides excellent lubrication of today's diesel and gasoline engines operating in severe applications to keep engines clean and promote long engine life. Potential for product line standardization.									



## Automotive Engine Oils

Brand name	SAE-Grade	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	TBN mg KOH/g	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Delvac MX Extra</b>	10W-40	102	14.7	150	0.868	-39	10.6	MB-Approval 228.5/235.28, MAN M 3275-1, Volvo VDS-3, MTU Category 2, Mack EO-N/EO-M Plus, Renault Trucks RDL-2, Voith Retarder Oil Class B, Avtodisel YaMZ-6-12, KAMAZ Euro-3,-4,-5	ACEA E7, API CI-4/CH-4/SL/SJ, Cat ECF-2, Cummins 20076/77	ACEA A2/B2, API CG-4/CF-4/CF, Cummins 20071/72, Detroit 7SE270, Renault Trucks RDL, Volvo VDS-2
	Extra high-performance diesel engine oil that helps extend engine life in the most severe on- and off-highway applications while delivering outstanding performance in modern, high-output, low-emission engines including those with Exhaust Gas Recirculation (EGR) and Aftertreatment Systems with Diesel Particulate Filters (DPFs) and Diesel Oxidation Catalysts (DOCs). Fully backwards compatible in older engine models.									
<b>Mobil Delvac MX ESP</b>	10W-30	79	11.9	145	0.87	-30	10.4	MB-Approval 228.31, MAN M 3575, Volvo VDS-4/VDS-3, Deutz DQC II-10 LA, Renault Truck RLD-3, Mack EO-O Premium Plus	ACEA E9/E7; API CJ-4/CI-4 Plus/CI-4/CH-4/SM, JASO DH-2, CAT ECF-3, Cummins 20081	API CF/CG-4
	Extra high-performance diesel engine oil that helps extend engine life in the most severe on- and off-highway applications while delivering outstanding performance in modern, high-output, low-emission engines including those with Exhaust Gas Recirculation (EGR) and Aftertreatment Systems with Diesel Particulate Filters (DPFs) and Diesel Oxidation Catalysts (DOCs). Fully backwards compatible in older engine models.									
<b>Mobil Delvac MX ESP</b>	15W-40	114	15	137	0.876	-30	10.4	MB- Approval 228.31, MAN M 3575, Volvo VDS-4/VDS-3/VDS-2, Deutz DQC II-10LA, Detroit Fluid Specification 93K214/93K218; Mack EO-N Premium Plus 03/EO-O Premium Plus, Allison TES-439, Renault Truck RLD-3, FAWDE Q/XC3135-2007 China V DE w/ SCR & China IV DE	ACEA E9/E7, API CJ-4/CI-4 Plus/CI-4/CH-4/SM/SL, JASO DH-2, CAT ECF-3, Cummins 20081,Isuzu DEO (w/ DPD Equipped Vehicles)	API CG-4/ CF-4/ CF-2/CF, MAN M 3275-1, Allison C-4
	Extra high-performance diesel engine oil that helps extend engine life in the most severe on and off-highway applications while delivering outstanding performance in modern, high-output, low-emission engines including those with Exhaust Gas Recirculation (EGR) and Aftertreatment Systems with Diesel Particulate Filters (DPFs) and Diesel Oxidation Catalysts (DOCs). Fully backwards compatible in older engine models. Suitable for heavy-duty applications and operating environments found in the trucking, mining, construction, quarrying, and agricultural industries.									
<b>Mobil Delvac MX</b>	15W-40	106	14.5	140	0.88	-30	10	MB-Approval 228.3, MAN M 3275-1, Volvo VDS-3, Mack EO-N/EO-M Plus, Renault Truck RLD-2, MTU Category 2, Avtodisel YaMZ-6-12, KAMAZ Euro-3,-4,-5	ACEA E7, API CI-4/CH-4/SL/SJ, Cat ECF-2, Cummins CES 20077/76, Isuzu DEO (w/DPD Equipped Vehicles)/ Small Manual Transmission Oil	ACEA A2/B2, API CG-4/CF-4/CF, Renault Truck RLD, Volvo VDS-2, Cummins 20071/72, Detroit 7SE 270, Mack EO-M
	Multipurpose high-performance diesel engine oil that provides excellent lubrication of today's diesel engines promoting long engine life. Recommended for mixed fleets and construction equipment.									
<b>Mobil Delvac Super 1400 E</b>	15W-40	106	14	135	0.887	-27	9.8	MB-Approval 228.3, MAN M 3275-1, MTU Category 1, KAMAZ Euro-3,-4,-5	API SJ	ACEA E3/A2/B2, API CG-4/CF-4/CF, Renault Truck RD/RD-2, Volvo VDS-2
	High-performance diesel engine oil that provides protection for diesel engines operating under severe service conditions for both on- and off-highway applications. Recommended by ExxonMobil for use in a wide range of heavy-duty applications and operating environments found in the trucking, mining, construction, quarrying, and agricultural industries.									



Brand name	SAE-Grade	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	TBN mg KOH/g	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Delvac 1640</b>	40	132	14.7	112	0.89	-21	12	MAN 270, MTU Category 2, ZF TE-ML 04B	JASO DH-1	API CF/SF, ACEA E2,
	Monograde diesel engine oil formulated to meet or exceed the demanding specifications of the world's leading builders of modern diesel engines.									
<b>Mobil Delvac 1630</b>	30	90	11.5	117	0.89	-30	12	MAN 270, MTU Category 2, ZF TE-ML 04B	JASO DH-1	API CF/SF, ACEA E2, Allison C-4
	Monograde diesel engine oil formulated to meet or exceed the demanding specifications of the world's leading builders of modern diesel engines.									
<b>Mobilgard 1 SHC</b>	40	109	14.5	136	0.872	-54	15		API CF-2/CF, MTU Typ 2	
	Synthetic, supreme-performance marine diesel engine oil, zinc-free. Specifically formulated to address the needs of high power, distillate fueled diesel engines. Provides unsurpassed lubrication including long drain capability and extended engine life for today's marine diesel engines operating in severe applications. Marine gearing applications where FZG Level 12 is required.									



## Automatic Transmission Fluids

Brand name	Kinematic Viscosity mm <sup>2</sup> /s		Viscosity Index	Density at 15°C g/cm <sup>3</sup>	Pour-point °C	Flash Point °C	Specifications		
	40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Delvac 1 ATF</b>	39	7,3	168	0,85	-54	236	Allison TES-468/TES-295, MB-Approval 236.91, ZF TE-ML 04D/14C/16M/20C, Voith Turbo H55.6336xx, Voith DIWA Service Bulletin 013 & 118-Extended Drain		
	Synthetic fluid for automatic transmissions, recommended by Allison Transmission, Inc. and approved against the Allison TES-295 and TES-468 Specifications.								
<b>Mobil ATF 220</b>	37	7.0	153	0.87	-44	200	MB-Approval 236.7, MAN 339 Typ L1/V1/Z1, VOITH TURBO H55.6335xx, ZF TE-ML-04D/11A/14A		GM Dexron II/Type A Suffix A, Allison C-4, Renk Doromat, Caterpillar TO-2, Ford ESR-M2C163-A, GM Type A Suffix A, Volvo 97340
	High-performance fluid for automatic transmissions in older vehicles specifying Dexron IID. It is also used as a hydraulic fluid in unique applications.								
<b>Mobil ATF 320</b>	8.2			0.86		197	ZF TE-ML 03D/04D/14A/17C, MAN 339 Typ L2/V1/Z1, VOITH TURBO H55.6335xx		GM Dexron III G, Ford Mercon, Allison C-4, Volvo 97341
	Extra high-performance automatic transmission fluid. Also suitable for power steering systems, hydraulic applications and some manual transmissions where an automatic transmission fluid is specified.								
<b>Mobil ATF SHC</b>	33	7.4	200	0.839	-51	210	MB-Approval 236.8, MAN 339 Typ L2/V2/Z2, VOITH TURBO H55.6335xx, ZF TE-ML 09X/14B/16L 14B		GM Dexron IIE, Allison C-4, Caterpillar TO-2, Renk Doromat
	Superior-performance synthetic automatic transmission fluid designed to meet the demanding requirements of automatic transmissions. For use in modern high-performance transmissions operating in the severe, high-temperature, heavy load or cold climate applications.								



Brand name	SAE-Grade	Kinematic Viscosity mm <sup>2</sup> /s		Visco- sity Index	Density at 15°C g/cm <sup>3</sup>	Pour- point °C	TBN mg KOH/g	Specifications		
		40°C	100°C					Approved	Meets or exceeds requirements of	Recommended by ExxonMobil for use in applications requiring
<b>Mobil Delvac 1 Transmission Fluid</b>	75W-80	55.7	9.5	155	0.858	-42	234	ZF TE-ML 01L/02L/16K, MAN 341 Typ E3/Z4		API GL-4, ZF TE-ML 08
	Extra high-performance manual transmission lubricant. Excellent shifting performance, low temperature fluidity and high temperature viscosity retention. For manual transmissions of on-highway light and heavy-duty trucks, busses, and vans.									
<b>Mobiltrans HD 10W</b>	10W	42.0	6.3	96	0.89	-33	202	ZF TE-ML 07F	Caterpillar TO-4	Allison C-4
	High-performance, heavy-duty transmission and drivetrain lubricant. Designed to optimise the performance of powershift transmissions, gearboxes, final drives, and hydraulic systems used in off-highway applications.									
<b>Mobiltrans HD 30</b>	30	100	11.2	97	0.89	-18	224	ZF TE-ML-03C/07F	Caterpillar TO-4	Allison C-4
	High-performance, heavy-duty transmission and drivetrain lubricant. Designed to optimise the performance of powershift transmissions, gearboxes, final drives, and hydraulic systems used in off-highway applications.									
<b>Mobiltrans AST</b>		107	14.2	134	0.882	-39	222		Caterpillar TO-4M	Allison C-4
	Extra high-performance drivetrain lubricant engineered to meet or exceed the requirements of Caterpillar's new TO-4M performance specifications for off-highway transmissions, drivetrains, and hydraulic systems. All Season Transmission lubricant for light to severe duty off-highway equipment operating in a wide range of environments.									

# Useful information

**Mobil industrial lubricants are available as standard in the following sizes:**

**Lubricating oils:**

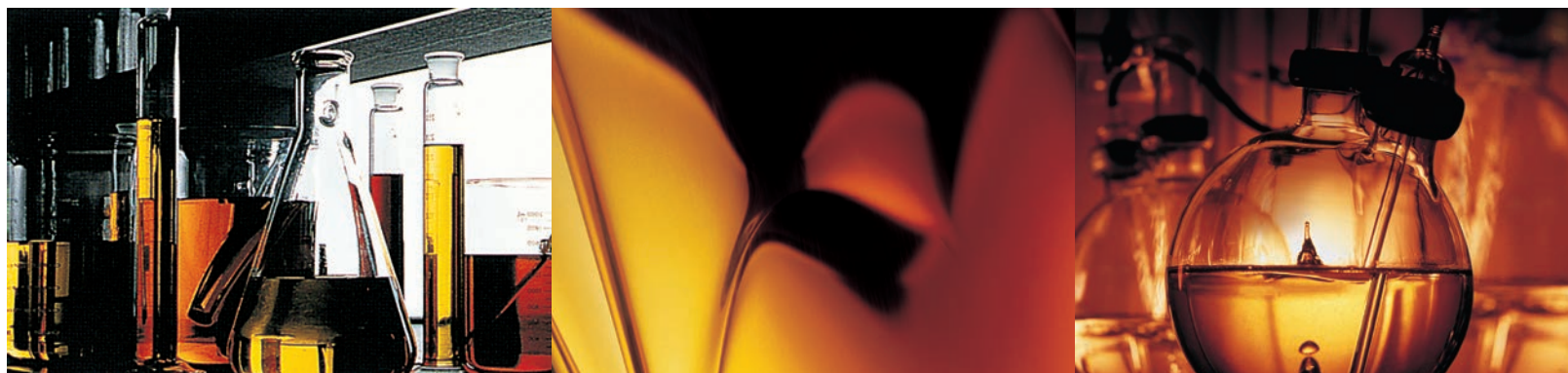
Lose Tanker  
1000 liters IBC  
208 liter steel drum  
60 liter steel drum (Keg)  
20 liter plastic container (Pail)

**Greases:**

180 kg steel drum  
18 kg plastic bucket (Pail)  
12 x 400 g cartridges

**Comments:**

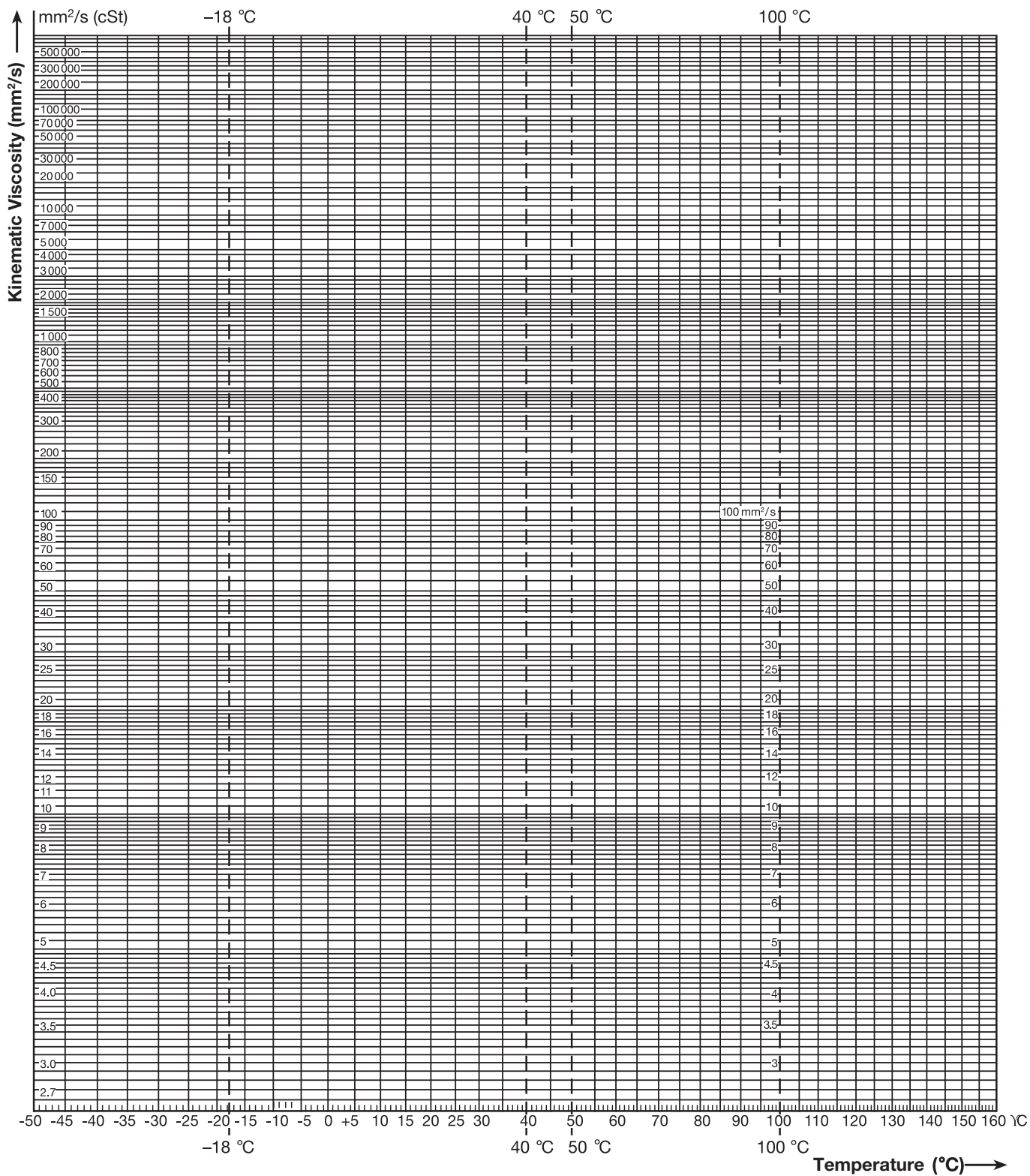
Not every product is available in all packages.





Performance by ExxonMobil

# Kinematic Viscosity-Temperature-Diagram





## ISO Viscosity Classification

The ISO Viscosity Grades are an International System approved by the International Standards Organisation for classifying lubricants according to viscosity. Each ISO Viscosity Grade corresponds to a mid-point of a viscosity range expressed in centiStokes (cSt or mm<sup>2</sup>/s) at 40°C.

ISO Viscosity Grade	Viscosity Ranges at 40 °C	Mid Point
ISO VG 2	1.98 – 2.42	2.2
ISO VG 3	2.88 – 3.52	3.2
ISO VG 5	4.14 – 5.06	4.6
ISO VG 7	6.12 – 7.48	6.8
ISO VG 10	9.00 – 11.0	10
ISO VG 15	13.5 – 16.5	15
ISO VG 22	19.8 – 24.2	22
ISO VG 32	28.8 – 35.2	32
ISO VG 46	41.4 – 50.6	46
ISO VG 68	61.2 – 74.8	68
ISO VG 100	90.0 – 110	100
ISO VG 150	135 – 165	150
ISO VG 220	198 – 242	220
ISO VG 320	288 – 352	320
ISO VG 460	414 – 506	460
ISO VG 680	612 – 748	680
ISO VG 1000	900 – 1100	1000
ISO VG 1500	1350 – 1650	1500

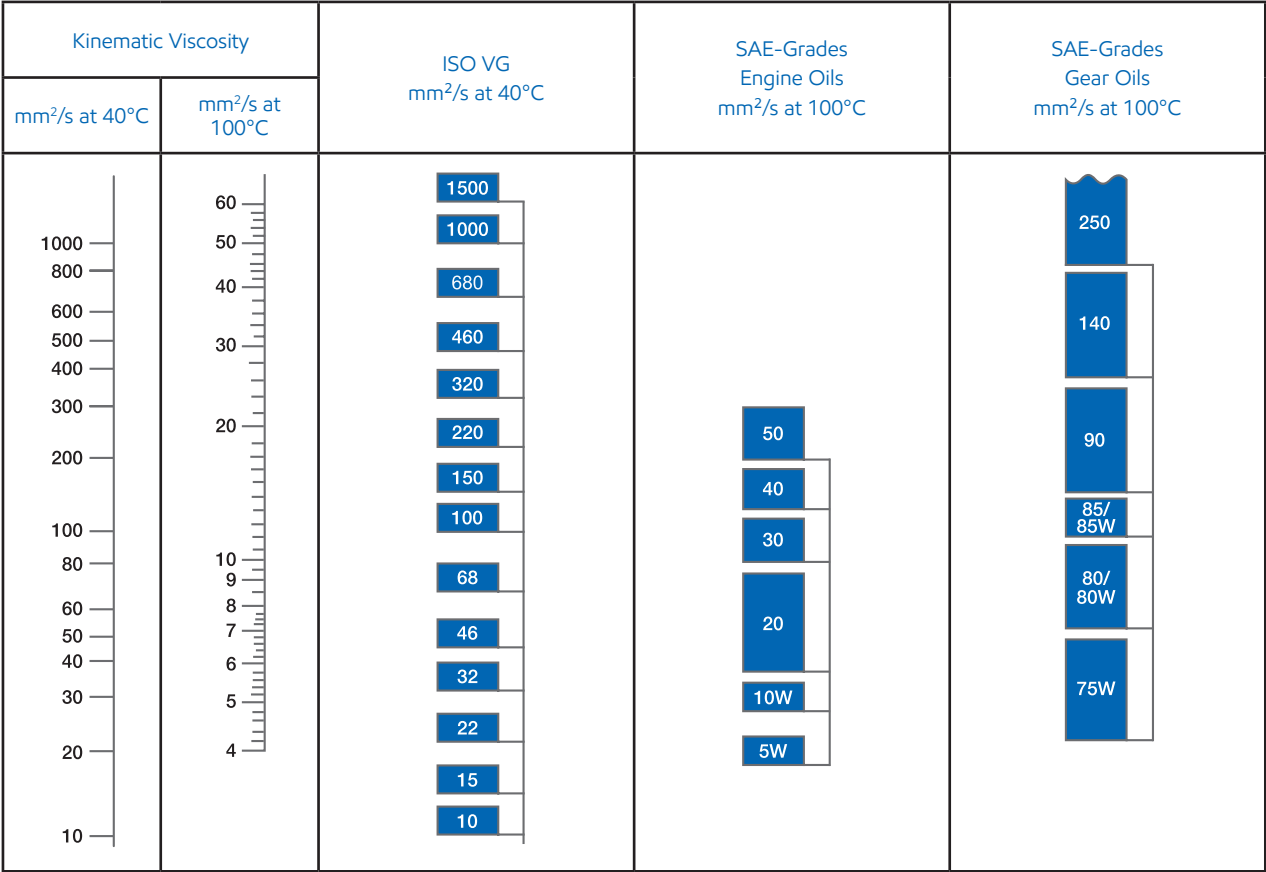
## Grease Consistency (NLGI)

Grade NLGI	Penetration 0,1 mm 25°C (after 60-stroke worked)
000	445 – 475
00	400 – 430
0	355 – 385
1	310 – 340
2	265 – 295
3	220 – 250



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# SAE ISO Viscosity Classification



## SAE

SAE International, formerly the Society of Automotive Engineers, is a U.S.-based, globally active professional association and organization for engineering professionals in various industries. Principal emphasis is placed on transport industries such as automotive, aerospace, and commercial vehicles. The Society coordinates the development of technical standards based on best practices identified and described by SAE committees and task forces.





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Notes

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## Notes



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Notes

Notes section with horizontal lines for writing.

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