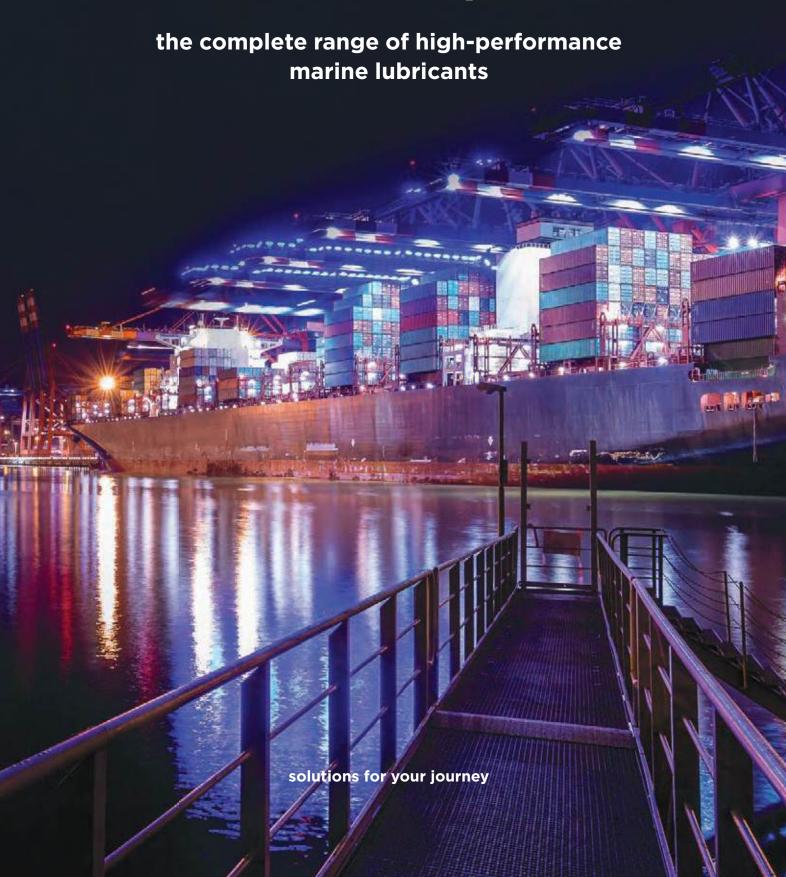


## marine lubricants product list





# We have regulation-ready, tailor-made solutions covering almost every compliant fuel requirement, delivering peace of mind whichever operational route you choose, wherever in the world you are.

Chevron products are subject to extensive field tests, and are designed to meet or exceed original engine manufacturer requirements. Supply is available at major ports all around the globe. The following table gives a brief description and typical physical properties of each product. For more details, please refer to individual product information at chevronmarine products.com, or contact your local Chevron representative or marketing office.

#### **Product List**

	SAE or ISO VG	Density 15°C kg/l		ic Viscosity s (cSt) @ 100°C	Viscosity Index	Flash Point °C	Pour Point °C	Base No. (BN)	Product Description
Slow-speed Engine Oils									
Taro <sup>®</sup> Ultra 40	50	0.92	-	19.0	>95	270	-15	40.0	High performance 40 BN cylinder oil for large bore two-stroke engines operating on fuels with a sulphul content up to $1.5\%$ , as well as intermittent ECA zone operations.
Taro* Ultra Advanced 40	50	0.92	_	19.0	>95	220	-15	40.0	High performance 40 BN cylinder oil for latest generation large MAN ES Category II marine diesel engine operating with a range of low to zero sulphur fuels including VLSFO, ULSFO, LNG and methanol.
Taro® Ultra 70	50	0.93	_	19.0	>95	270	-15	70.0	High performance 70 BN cylinder oil for large bore two-stroke engines, compatible with a wide variety of fuels.
Taro® Ultra 100	50	0.95	_	19.0	>95	270	-15	100.0	High performance 100 BN cylinder oil suitable for use with a wide range of large bore two-stroke engines with a sulphur content of $1.5\%$ and above, including scrubber equipped vessels.
Taro® Ultra 140	50	0.98	_	19.0	>95	270	-15	140.0	High performance 140 BN cylinder oil for large bore two-stroke engines operating on fuels with a sulph content above 1.5%. Optimized for combating cold corrosion on scrubber equipped vessels.
Veritas® 800 Marine 30	30	0.89	111.0	11.9	95	240	-18	5.6	Large bore two-stroke slow speed engine system oil.
Medium-speed Engine Oils									
Taro* 20 DP 30 (X)*	30	0.90	94.0	11.0	102	240	-12	20.0	Medium-speed engine oil. Fuel sulphur level up to 2%.
Taro* 20 DP 40 (X)*	40	0.90	135.0	14.0	100	240	-12	20.0	Medium-speed engine oil. Fuel sulphur level up to 2%.
Taro* 30 DP 30 (X)*	30	0.91	94.0	11.0	104	240	-12	30.0	Medium-speed engine oil. Fuel sulphur level up to 4%.
Taro* 30 DP 40 (X)*	40	0.91	135.0	14.0	105	240	-12	30.0	Medium-speed engine oil. Fuel sulphur level up to 4%.
Taro* 40 XL 40 (X)*	40	0.90	135.0	14.0	105	240	-12	40.0	Medium-speed engine oil. Fuel sulphur level up to 4.5%.
Taro* 50 XL 40 (X)*	40	0.91	135.0	14.0	106	240	-12	50.0	Medium speed engine oil. Fuel sulfur level up to 4.5%. Suitable for operation on fuel of high sulfur conter in combination with a low natural engine oil consumption.
Delo® 1000 Marine 30	30	0.89	102.0	11.6	100	240	-18	12.0	Medium-speed engine oil. Fuel sulphur level up to 1.5%.
Delo® 1000 Marine 40	40	0.89	135.0	14.0	100	240	-18	12.0	Medium-speed engine oil. Fuel sulphur level up to 1.5%.
Delo® SHP SAE 30	30	0.89	104.0	11.8	100	240	-15	12.0	High performance SAE 30 diesel engine oil for medium- and high-speed trunk piston diesel engines operating under severe conditions.
Delo® SHP SAE 40	40	0.89	135.0	14.0	100	240	-18	12.0	High performance SAE 40 diesel engine oil for medium- and high-speed trunk piston diesel engines operating under severe conditions.
Delo® 710 LE SAE 20W-40	20W-40	0.88	-	15.5	-	_	-27	_	High performance zinc- and chlorine-free multi-grade diesel engine system oil.
High-speed Engine Oils									
Delo® 400 MGX SAE 15W-40	15W-40	0.88	_	14.6	_	228	-36	9.6	High-speed diesel engine oil with low saps. API CJ-4 performance.
Delo® Gold Ultra SAE 15W-40	15W-40	0.89	115.4	15.2	138	230	-39	10.2	Standard mineral multi-grade four-stroke trunk piston engine oil on light fuels.
Delo® 400 XSP SAE 5W-40	5W-40	0.85	_	15.4	_	_	-46	10.0	Mixed-fleet engine oil for naturally aspirated and turbocharged four-stroke diesel and gasoline engines.
Delo® 400 SAE 40	40	0.89	_	14.7	_	_	-24	10.1	Monograde of SAE 40 viscosity for four-stroke trunk piston engine on light fuels.
Delo® 100 Motor Oil SAE 40	40	0.89	131.0	14.5	109	270	-24	7.3	Low ash, two-stroke diesel engine oil for Detroit Diesel engines.

<sup>\*</sup> Depending on the port designated, products may be delivered with or without the (X) identifier (e.g., Taro\* 40 XL 40X or Taro\* 40 XL 40). However, the product typical test data both with or without the (X) identifier are miscible and fully compatible.

	SAE or ISO VG	Density 15°C kg/l		tic Viscosity 's (cSt) @ 100°C	Viscosity Index	Flash Point °C	Pour Point °C	Base No. (BN)	Product Description
Compressor Oils							-	, ,	
Capella® HFC 32	32	1.00	32.0	5.7	119	>240	-57	_	Refrigeration compressor oil, for chlorine-free refrigerants such as R134a, R404a, and R507.
Capella® HFC 55	55	1.01	53.0	8.4	132	>270	-51	_	Refrigeration compressor oil, for chlorine-free refrigerants such as R134a, R404a, and R507.
Capella® HFC 100	100	0.97	100.0	11.4	100	>260	-30	_	Refrigeration compressor oil, for chlorine-free refrigerants such as R134a, R404a, and R507.
Capella® Low Temp AB 68	68	0.87	68.0	6.5	_	190	-42	_	Synthetic (alkylbenzene based) refrigeration compressor oil for ammonia and R22 or R502 at low evaporator temperatures.
Capella® WF 32	32	0.90	30.0	4.4	6	168	-39	_	Refrigeration compressor oil, for ammonia, methylchloride, CO <sub>2</sub> and certain types of (H)CFC refrigerant gases.
Capella® WF 68	68	0.91	64.0	6.5	13	179	-33	_	Refrigeration compressor oil, for ammonia, methylchloride, CO <sub>2</sub> and certain types of (H)CFC refrigerant gases.
Cetus® DE 100	100	0.96	96.0	10.1	_	252	-39	_	Synthetic (diester based) lubricating oil for reciprocating air compressors.
Cetus® PAG	_	1.06	185.0	35.0	_	260	-30	_	Synthetic (PAG based) lubricating oil for chemical & hydrocarbon gas compressors (including LNG & LPG).
Cetus® PAO 46	46	0.84	46.0	8.1	150	232	-46	_	Synthetic (PAO-based) lubricating oil for rotary air compressors.
Cetus® PAO 68	68	0.85	68.0	10.4	140	240	-47	_	Synthetic (PAO-based) lubricating oil for rotary air compressors and turbochargers.
Compressor Oil EP VDL 100	100	0.89	100.0	11.3	97	248	-12	_	Mild EP oil for reciprocating air compressors.
Capella® A 68	68	0.84	68.7	10.6	143	260	-57	_	Synthetic (PAO-based) lubricating oil for the lubrication of compressors used in refrigeration and air-conditioning systems with ammonia, carbon dioxide and halogenated refrigerants.
<b>Specialty Products</b>									
1000 THF®	-	0.87	59.0	9.3	145	235	-42	_	High quality, multifunctional tractor hydraulic fluid.
Delo® Gear EP-5 SAE 80W-90	-	0.88	135.0	14.3	101	150	-52	_	Automotive gear lubricant suitable for API GL-5 applications.
Havoline® ATF III-H	-	0.86	34.1	7.0	171	_	-50	_	Automatic transmission fluid.
Havoline® Outboard 2T		0.87	54.0	8.7	138	134	-39	5.7	Two-stroke marine outboard oil, formulated with an ashless additive system.
HDAX® 5200 Low Ash Gas Engine Oil SAE		0.88	72.0	13.5	100	_	-33	4.2	Low ash gas engine oil.
Texatherm® 32	32	0.86	32.0	5.5	106 105	220 235	-15 15	_	Heat transfer fluid for temperatures up to 320°C (max. film temperature 340°C).
Texatherm® 46	46	0.86	46.0	6.9	105	255	-15		Heat transfer fluid for temperatures up to 320°C (max. film temperature 340°C).
Gear Oils									
Meropa® 68	68	0.88	68.0	8.8	100	200	-15	_	Extreme pressure industrial gear lubricant.
Meropa® 100	100	0.88	100.0	11.4	100	200	-15	_	Extreme pressure industrial gear lubricant.
Meropa® 150 Meropa® 220	150 220	0.89 0.89	150.0 220.0	14.9 19.2	100 100	215 215	-15 -15	_	Extreme pressure industrial gear lubricant.  Extreme pressure industrial gear lubricant.
Meropa® 320	320	0.90	320.0	24.3	100	215	-15	_	Extreme pressure industrial gear lubricant.
Meropa® 460	460	0.90	460.0	30.0	100	215	-15	_	Extreme pressure industrial gear lubricant.
Meropa® 680	680	0.90	680.0	36.5	95	240	-10	_	Extreme pressure industrial gear lubricant.
Meropa® MG 100	100	0.89	100.0	11.3	99	234	-24	-	Premium high-performance gear oil.
Meropa® MG 150	150	0.90	150.0	14.8	98	254	-25	_	Premium high-performance gear oil.
Meropa® MG 220	220	0.90	220.0	19.0	97	268	-26	_	Premium high-performance gear oil.
Meropa® EliteSyn WS 150	150	1.05	150.0	25.0	227	284	-42	_	Premium performance synthetic industrial gear oil (PAG based).
Meropa® EliteSyn WS 220	220	1.06	220.0	42.0	241	284	-42	_	Premium performance synthetic industrial gear oil (PAG based).
Meropa® EliteSyn WS 460 Meropa® EliteSyn WS 680	460 680	1.07 1.07	460.0 680.0	83.0 122.0	262 272	284 284	-36 -33	_	Premium performance synthetic industrial gear oil (PAG based).  Premium performance synthetic industrial gear oil (PAG based).
Meropa® Synthetic EP 150	150	0.85	150.0	18.8	150	244	-33 -48	_	Synthetic high VI gear oil of ISO VG 150.
Meropa® Synthetic WM 320	320	0.85	320.0	35.4	156	240	-48	_	Synthetic high VI gear oil of ISO VG 320.
Meropa® WG 460	460	_	439.0	30.0	97	284	-9	_	High viscosity industrial gear and steam cylinder oil with low carbon residue.
Pinnacle® Marine Gear 220	220	0.89	220.0	22.7	115	250	-45	_	Synthetic high VI gear oil of ISO VG 220.
Hydraulic Oils									
Rando® HDZ 15	15	0.88	15.0	3.9	155	144	-60	_	High VI hydraulic oil.
Rando® HDZ 22	22	0.95	22.0	5.0	165	165	-48	_	High VI hydraulic oil.
Rando® HDZ 32	32	0.87	32.0	6.3	151	200	-48	_	High VI hydraulic oil.
Rando® HDZ 46	46	0.87	46.0	8.2	154	215	-47	_	High VI hydraulic oil.
Rando® HDZ 68	68	0.88	68.0	11.0	150	222	-42	_	High VI hydraulic oil.
Rando® HDZ 100	100	0.88	100.0	14.2	139	236	-36	_	High VI hydraulic oil.
Clarity® Hydraulic Oil AW 100	100	-	95.0	13.8	145	260	-40	_	Zinc-free and ashless hydraulic fluid (environmentally sensitive areas).
Clarity® Synthetic Hydraulic Oil AW 32	32	_	32.5	7.0 9.3	183	220	-45	_	Synthetic, zinc-free, ashless hydraulic oil with an environmentally acceptable formulation.
Clarity® Synthetic Hydraulic Oil AW 46 Clarity® Synthetic Hydraulic Oil AW 68	46 68	_	46.5 68.5	11.8	183 162	225 240	-42 -42	_	Synthetic, zinc-free, ashless hydraulic oil with an environmentally acceptable formulation.
Hydraulic Oil 5606®	15	0.87	15.0	5.5	300+	82	-42 -63	_	Synthetic, zinc-free, ashless hydraulic oil with an environmentally acceptable formulation.  High performance general purpose red-dyed hydraulic oil.
Turbine Oils		5.67	20.0	3.3	230	02			g., p
	32	0.86	31.5	E 4	105	224	1.4		Premium turbine oil for special Mitsubishi application under MS04-MA-CL002.
GST® Premium 32 Regal R&O® 32	32	0.88	30.4	5.4 5.2	105	224 220	-14 -15	_	Premium turbine oil for special Mitsubishi application under MS04-MA-CL002.  Marine turbine oil, including gas turbines.
Regal R&O® 46	46	0.87	43.7	6.5	98	224	-15	_	Marine turbine oil, including gas turbines.
Regal R&O 40	68	0.86	64.6	8.4	99	245	-15	_	Marine turbine oil, including gas turbines.
Regal R&O® 100	100	0.88	95.0	10.8	97	215	-15	_	ISO VG 100 turbine oil for steam and hydroelectric turbines.
Regal R&O® 320	320	0.89	43.7	6.5	98	252	-15	_	ISO VG 320 turbine oil for steam and hydroelectric turbines.
Regal SGT* 22	22	-	25.6	5.1	123	270	-57	-	Designed for use in modified aviation type gas turbines in non-aviation stationary applications such as industrial power generation and marine service.

	Thickener	Color	Penetration worked at 25°C	Average Drop Point °C	Min/Max Operating Temp °C	NGLI-Class	Description/Application
Greases							
Coupling Grease®	Lithium	Dark Brown	330	190	-10 to 120	1	A tacky lithium grease specifically designed for lubrication of industrial flexible couplings.
Delo® Starplex EP 2	Lithium Complex	Dark Red	280	230+	-35 to 140	2	Multi-purpose EP grease for general applications.
Molytex® EP 2	Lithium	Dark Grey	280	210	-25 to 120	2	Multi-purpose EP grease containing $MoS_2$ as a solid lubricant for high load applications.
Multifak® EP 0	Lithium	Light Brown	370	180	-30 to 120	0	Multi-purpose EP grease for general applications.
Multifak® EP 1	Lithium	Amber to Brown	325	195	-30 to 120	1	Multi-purpose EP grease for general applications.
Multifak® EP 2	Lithium	Brown	280	195	-30 to 120	2	Multi-purpose EP grease for general applications.
Multifak® EP 3	Lithium	Amber to Brown	235	205	-30 to 120	3	Multi-purpose EP grease for general applications.
Novatex® EP 2	Calcium Anhydrous	Light Yellow	280	>140	-30 to 110	2	Water resistant extreme pressure calcium-12-hydroxystearate grease.
Rust Proof Compound L®	_	Dark Brown	280	_	55 (max)	L	Soft film rust preventive for relatively long-term protection of iron and steel components.
Clarity® Synthetic EA Grease 0	Anhydrous Calcium	_	363	186	-40 to 100	0	Multi-purpose biodegradable EP grease formulated for the lubrication of heavily loaded bearings in wet and corrosive environments, even at low temperatures.
Clarity® Synthetic EA Grease 2	Anhydrous Calcium	Yellow	280	>140	-40 to 100	2	This multi-purpose biodegradable EP grease offers excellent adhesion and water resistance.
SRI Grease®	Polyurea	Dark Green	280	243	-20 to 140	2	Specially formulated grease containing a highly refined paraffinic base oil, synthetic polyurea ashless organic thickener and high-performance rust and oxidation inhibitors.
Starplex® EP 3	Lithium Complex	Brown	220-250	>250	-20 to 150	3	High performance multipurpose grease, formulated for long-term service in roller-and ball-bearing applications, operating at high temperatures and under high loads.
Texclad®	Calcium	Black	280	88	-10 to 60	2	Calcium grease with graphite and MoS₂ for open gears, wire ropes & general grease points of deck equipmen
Ulti-Plex® Synthetic EP	Lithium Complex	Light Tan	315	280	-30 to 230	1.5	Synthetic multi-purpose and high-performance grease for high and low temperature applications.

		Kinematic Viscosi	ty mm <sup>2</sup> /s (cSt) @		Flash Pour			
	ISO VG	40°C	100°C	Viscosity Index	Point °C	Point °C	Description/Application	
Environmentally Acceptable Lubricants <sup>†</sup>								
Clarity® Synthetic EA Gear Oil 100	100	100	18.0	199	185	-39	Environmentally Acceptable, VGP compliant gear oil.	
Clarity® Synthetic EA Hydraulic Oil 100	100	100	18.8	210	193	-48	Environmentally Acceptable, VGP compliant hydraulic and stern tube oil.	

<sup>†</sup> The specifications for Clarity\* Synthetic EA Grease 0 and Clarity\* Synthetic EA Grease 2 can be found in the Greases section of this product list.

Cooling Water Treatments	Base	Density at 20°C kg/l	Concentration (In water) %	Freeze Protection °C	Toxic Classification	Seal Compatibility	Content on Nitrite; Amine Phosphate Borate, Silicate	Color	Description/Application
Delo® XLC Antifreeze/Coolant - Concentrate	Ethylene-Glycol based Carboxylic Acid	1.11	50	-37	Harmful	No adverse effect on rubber	Nil	Orange	Long-life protection against freezing, boiling, corrosion <sup>t</sup> .
Delo® XLI Corrosion Inhibitor – Concentrate	Water-based Carboxylic Acid	1.06	5-10	Nil	Low	hoses & gasket materials.	Nil	Green	Long-life corrosion protection <sup>1</sup> .

<sup>‡</sup> Chevron's proprietary inhibitor technology operates by attacking free radical sites on the metal surface and sealing them before corrosion begins, also providing a very efficient heat transfer.

The data contained in the tables above are typical values shown for information only and may vary from location to location. Consult your original equipment manufacturer for recommendations about selecting the appropriate product for your equipment.

#### **Additional Services**

FAST™ Service	Contracted customers have access to FAST™, a comprehensive equipment condition monitoring program which reports the condition of oil in service and plots the trends of important properties of the oil.	DOT.FAST® Service	Contracted customers have access to DOT.FAST®, a complete service including the D Oil Analyzer for onboard testing of used cylinder drain oil samples (drip oil) and regulaboratory analysis with expert advice from experienced engineers. Drip Oil Analysis		
<b>Lubrication Charts</b>	Each contracted vessel has a detailed lubrication chart, listing all onboard equipment, lubricants, and the suggested application based on manufacturers' recommendations.		is recommended by the major slow-speed engine builders to better understand piston running conditions in the engine.		
	Our system enables authorized users to access details on the Internet.	Vessel	To protect the equipment that drives your business, Chevron has developed a vessel		
OnePort™	Authorized users can use this Internet-based ordering system to check prices at different ports, place orders and track deliveries through the various stages of supply.	Optimization	optimization support program — supported by our industry-experienced technical field staff and lubricants analysis experts — providing advice to reduce your total cost of operation, maximizing uptime and improving reliability. Contact your account manager to find out how Chevron Marine Lubricants can optimize your operation.		

### **Comparative Viscosity Classifications**

