
FOR SMOOTHER OPERATIONS

LUBRICANTS FOR MARINE APPLICATIONS



SHELL MARINE PRODUCTS - Lubricants for Marine Applications

Shell Marine Products maintains a balanced range of marine lubricants to cover most shipboard lubricant requirements. Our range of products provides you with optimum cost-effective protection for modern engines and all shipboard machinery. Given the storage constraints onboard, a number of major grades have been formulated for compatibility with a variety of applications. This decreases the inventory complexity and size onboard most vessels.

Typical physical characteristics together with brief product and application descriptions are given in the table below.

LOW SPEED ENGINES		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
ALEXIA 50	Premium quality cylinder lubricant for use in all low speed diesel engines operating on residual fuel with sulphur content higher than 1.5% wt	225	19.5	70	>205	<-6	932
ALEXIA LS	A special 40 BN cylinder lubricant for use in low speed diesel engines operating on residual fuel with sulphur content lower than 2% wt	211	19.5	40	210	-6	925
MELINA S 30	System lubricant for low speed marine diesel engines	104	11.6	5	227	-18	897

MEDIUM SPEED ENGINES		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
ARGINA T 30	Lubricant for highly rated medium speed diesel engines operating on residual fuel under moderate oil stress conditions	110	12	30	212	-18	918
ARGINA T 40	Lubricant for highly rated medium speed diesel engines operating on residual fuel under moderate oil stress conditions	135	14	30	225	-18	921
ARGINA X 40	Lubricant for highly rated medium speed diesel engines operating on residual fuel under high oil stress conditions	135	14	40	205	-18	916
ARGINA XL 40	Lubricant for highly rated medium speed diesel engines operating on residual fuel under very high oil stress conditions	135	14	50	229	-18	921
GADINIA AL 30	Advanced lubricant for medium speed marine diesel engines operating on distillate fuels and where liner lacquering is a potential problem	94.5	11.4	15	>200	-18	893
GADINIA AL 40	Advanced lubricant for medium speed marine diesel engines operating on distillate fuels and where liner lacquering is a potential problem	140	14.3	15	>200	-18	900
GADINIA 30	Lubricant for medium speed marine diesel engines operating on distillate fuels	104	11.8	12	200+	-18	897
GADINIA 40	Lubricant for medium speed marine diesel engines operating on distillate fuels	139	14.4	12	225+	-18	900

HIGH SPEED ENGINES		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
SIRIUS 15W-40	Lubricant for use in high speed diesel engines	105	14.3	10.8	205	-39	886
SIRIUS X 40	Premium SHPD lubricant (Super High Performance Diesel)	139	14	17	230	-18	890

HYDRAULIC SYSTEMS		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
TELLUS T 15	Premium hydraulic lubricant for wide temperature ranges	15	3.8	-	160	-42	871
TELLUS T 22	Premium hydraulic lubricant for wide temperature ranges	22	4.9	-	176	-42	872
TELLUS T 32	Premium hydraulic lubricant for wide temperature ranges	32	6.4	-	170	-42	872
TELLUS T 46	Premium hydraulic lubricant for wide temperature ranges	46	8.2	-	210	-39	872
TELLUS T 68	Premium hydraulic lubricant for wide temperature ranges	68	10.9	-	230	-36	877
TELLUS T 100	Premium hydraulic lubricant for wide temperature ranges	100	14.7	-	176	-30	889

GEAR SYSTEMS		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
OMALA 68	Extreme pressure lubricant for highly loaded enclosed gears and bearings	68	8.7	-	193	-27	880
OMALA 100	Extreme pressure lubricant for highly loaded enclosed gears and bearings	100	11.4	-	195	-27	880
OMALA 150	Extreme pressure lubricant for highly loaded enclosed gears and bearings	150	15	-	198	-21	884
OMALA 220	Extreme pressure lubricant for highly loaded enclosed gears and bearings	220	19	-	204	-18	900
OMALA 320	Extreme pressure lubricant for highly loaded enclosed gears and bearings	320	25	-	210	-15	893
OMALA 460	Extreme pressure lubricant for highly loaded enclosed gears and bearings	460	31.8	-	216	-9	897
OMALA HD 220	Synthetic extreme pressure lubricant for enclosed gears and bearings	220	25.8	-	245	-48	853
OMALA RL 220	Synthetic lubricant for enclosed gears and bearings	220	29	-	265	-40	863
OMALA RL 320	Synthetic lubricant for enclosed gears and bearings	320	41	-	276	-40	867
TIVELA S 220	Advanced synthetic gear lubricant	220	34.4	-	298	-39	1074

AIR COMPRESSORS		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
CORENA AP 68	Advanced synthetic lubricant for reciprocating air compressors	68	8.5	-	250	-51	990
CORENA AP 100	Advanced synthetic lubricant for reciprocating air compressors	100	10.2	-	260	-39	988
CORENA AS 46	Advanced synthetic lubricant for rotary screw and vane air compressors	46	8	-	235	-33	854
CORENA AS 68	Advanced synthetic lubricant for rotary screw and vane air compressors	68	11	-	240	-33	859
CORENA P 68	High performance lubricant for reciprocating air compressors	68	7.8	-	235	-33	883
CORENA P 100	High performance lubricant for reciprocating air compressors	100	9.2	-	240	-33	899
CORENA P 150	High performance lubricant for reciprocating air compressors	155	12.1	-	240	-30	902

REFRIGERATION COMPRESSORS		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
CLAVUS AB 32	Synthetic refrigerator lubricant for use with HCFC and Ammonia refrigerants	30	4.2	-	180	-42	888
CLAVUS AB 46	Synthetic refrigerator lubricant for use with HCFC and Ammonia refrigerants	46	5	-	180	-42	869
CLAVUS AB 68	Synthetic refrigerator lubricant for use with HCFC and Ammonia refrigerants	68	6	-	190	-42	871
CLAVUS R 32	Synthetic refrigerator lubricant for use with R134a and other HFC refrigerants	32	6	-	255	-54	1018
CLAVUS R 46	Synthetic refrigerator lubricant for use with R134a and other HFC refrigerants	42	6.2	-	245	-48	975
CLAVUS R 68	Synthetic refrigerator lubricant for use with R134a and other HFC refrigerants	64	8.6	-	250	-42	990
CLAVUS R 100	Synthetic refrigerator lubricant for use with R134a and other HFC refrigerants	93	10.9	-	280	-42	990

STEAM TURBINES		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
TURBO T 32	Steam turbine lubricant	32	5.2	-	210	<-12	871
TURBO T 68	Steam turbine lubricant	68	8.5	-	240	-9	876
TURBO T 100	Steam turbine lubricant	100	11.4	-	250	-9	879

STERN TUBES		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
STROMBUS MP	Emulsifiable lubricant for oil filled stern tubes fitted with lip seal and other modern sealing systems	273	-	-	200	-5	900

BEARING AND CIRCULATION SYSTEMS		Viscosity mm ² /s at		BN mg/KOH/g	Flash Point PMCC °C	Pour Point °C	Density kg/m ³ 15 °C
		40°C	100°C				
MORLINA 150	Advanced, circulating and bearing lubricant	150	15	-	262	-15	887

OTHER OILS AND FLUIDS

		Viscosity mm ² /s at		BN	Flash Point	Pour Point	Density
		40°C	100°C	mg/KOH/g	PMCC °C	°C	kg/m ³ 15 °C
ENSIS DW 2462	Long term rust preventive with dewatering properties	-	-	-	-	-	-
THERMIA B	Heat transfer fluid	25	4.7	-	220	-12	868
GLYCOSHELL CONCENTRATE	A concentrated phosphate and nitrate-free, low silicate, anti-freeze, to be mixed with water, for engine cooling systems	-	-	-	-	-	-

GREASES

		Base Oil Viscosity mm ² /s at		NLGI	Dropping Point
		40°C	100°C		
ALBIDA EP 2	Top performance, high temperature, extreme pressure multi-purpose grease	220	19	2	260
ALVANIA EP (LF) 0	General purpose extreme-pressure grease	189	15.6	0	-
ALVANIA EP (LF) 2	General purpose extreme-pressure grease	189	15.6	2	180
ALVANIA RL 3	Multi-purpose grease for general applications	100	10.2	3	190
ALVANIA HDX 2	High performance heavy duty grease containing solid lubricants	160	15.5	2	188
RHODINA EP (LF) 2	Highly water resistant, extreme pressure grease for wire rope, open gear and other open deck grease requirements	320	16	2	93
STAMINA EP2	Ultimate performance extreme pressure diurea grease	220	19	2	260

VISCOSITY RANGE OF ISO VISCOSITY GRADES

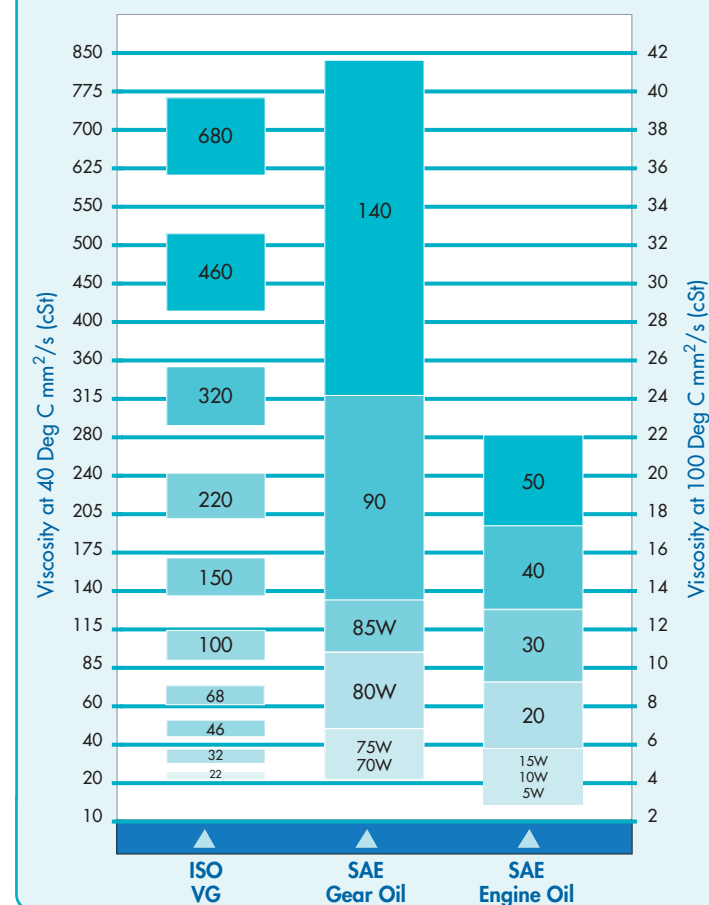
ISO Viscosity Grade		Viscosity Range mm ² /s (cSt) at 40 Deg C
ISO VG	2	1.98 - 2.42
ISO VG	3	2.88 - 3.52
ISO VG	5	4.14 - 5.06
ISO VG	7	6.12 - 7.48
ISO VG	10	9.0 - 11.0
ISO VG	15	13.5 - 16.5
ISO VG	22	19.8 - 24.2
ISO VG	32	28.8 - 35.2
ISO VG	46	41.4 - 50.6
ISO VG	68	61.2 - 74.8
ISO VG	100	90 - 110
ISO VG	150	135 - 165
ISO VG	220	198 - 242
ISO VG	320	288 - 352
ISO VG	460	414 - 506
ISO VG	680	612 - 748
ISO VG	1,000	900 - 1,100
ISO VG	1,500	1,350 - 1,650

GREASE NLGI Classification

NLGI Consistency	Cone Penetration (worked)
6	85 - 115
5	130 - 160
4	175 - 205
3	220 - 250
2	265 - 295
1	310 - 340
0	355 - 385
00	400 - 430
000	445 - 475

Further advice on Shell marine lubricants and their applications can be obtained from your Shell Marine Products representative or visit us at www.shell.com/marine
SMP-Marketing@shell.com
Shell Marine Products Limited
Shell Centre, York Road, London SE1 7NA

APPROXIMATE EQUIVALENCE OF VISCOSITY GRADING SYSTEMS



HEALTH, SAFETY, SECURITY & ENVIRONMENT

Commitment to Sustainability

As with all Shell companies, Shell Marine Products has a clear commitment to Health, Safety, Security & Environment (HSSE).

We are committed to sustainable development, and to working with our customers to manage the impacts that our operations and lubricants may have on society and the environment.

Our constantly improving HSSE Management System assures customers that we have regularly-improved processes and procedures in place with a culture of genuine care for people and the environment both now and in the future.

Delivery Operations

Shell Marine Products Operating Procedures support a safe, secure and efficient delivery of bulk and packed lubricants to all customers in all locations where Shell Marine Products is present. In this way we aim to have HSSE performance we can be proud of, to earn the confidence of customers, shareholders and society at large, to be a responsible supplier and to contribute to sustainable development.

In Shell Marine Products we are all committed to:

- Pursuing the goal of no harm to people
- Protecting the environment
- Using materials and energy efficiently to provide our products and services
- Developing energy resources, products and services consistent with these aims
- Publicly reporting on our HSSE performance
- Playing a leading role in promoting best practise in our industry
- Managing HSSE matters as any other critical business activity
- Promoting a culture in which all Shell Marine Products employees share these commitments.



For further information please contact your Shell Marine Products representative or visit www.shell.com/marine

IF THERE'S ANY* WEAR ANYWHERE WE'LL TELL YOU

As leaders in Marine Technology, together with our partners Kittiwake, we have developed an onboard oil monitoring solution - **ANALEX**Alert. This measures uncombined ferrous debris in oil and greases to alert when components are showing signs of wear. It can be used to test cylinder drain oil, critical hydraulic systems, gearboxes, thrusters, cranes - in fact, any onboard machinery that uses oil or grease.



ANALEXAlert is fast, portable, self-calibrating and maintenance free. Using it is simplicity itself - follow the instructions and your results are displayed within 10 seconds! It allows you to make informed decisions about maintenance intervals and potentially saves you costly engine damage and equipment downtime.

ANALEXAlert – a small price to pay for your peace of mind.

* ferrous wear

www.shell.com/marine



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