



Shell Marine

# SHELL HIGH-SPEED DIESEL ENGINE OIL

FORWARD TOGETHER



## **SHELL SIRIUS**

SHELL SIRIUS S4 15W-40

SHELL SIRIUS S4 20W-50

SHELL SIRIUS S4 L 15W-40

SHELL SIRIUS S6 LM 10W-40

## **SHELL SUPER MARINE**

SHELL SUPER MARINE S2 20W-50

SHELL SUPER MARINE S3 15W-40

## **SHELL MARINE 40**

SHELL MARINE 40

# **SHELL HIGH-SPEED DIESEL ENGINE OIL**

**FOR YOUR FLEET, YOUR VESSEL, YOUR ENGINE.**

At Shell Marine, we're here to make your voyages more efficient, predictable and cleaner. Because we understand the marine industry, we know how to help protect your fleet and ensure your vessels operate smoothly and reliably.

Our Shell Marine high-speed diesel engine oil range is a marine-formulated grade that's designed specifically for marine engines, from offshore vessels to small fishing boats.

## **BUSINESS BENEFITS**

### **Reliable and efficient**

Our technology helps extend your engine life with longer oil drain intervals, and optimise your engine performance helping lower costs. A number of our marine grade engine oils are also approved by leading engine manufacturers for your additional peace of mind.

### **Marine Expertise**

With over 100 years of experience in the marine industry, and ongoing service and support to more than 10,000 vessels worldwide, our technical expertise provides high levels of assurance, with the right solutions designed to optimise your fleet performance and reduce your total operating costs.





## SHELL SIRIUS

Shell Sirius oils are specifically designed for high-speed engines used from shipping vessels, cruise liners, ferries, offshore vessels, patrol boats, tugboats, fishing boats.



## Greater protection

Providing enhanced resistance to thermal breakdown, Shell Sirius engine oils offer continuous protection throughout the oil-drain interval, even under the most severe conditions.



## Longer oil life

The additive formulation of Shell Sirius engine oils helps to fight the combined effects of combustion acids and increased heat for longer.



## Adaptive technology

All Shell Sirius engine oils are formulated with Shell's additive technology, enabling enhanced acid control, deposit control and wear control.

# SHELL SIRIUS ENGINE OILS.

## HIGH-SPEED. HIGH PERFORMANCE

Today's shipping industry faces more pressure than ever to reduce operational costs, while sourcing high quality fuels and lubricants that meet the demands of advanced marine engines.

Shell Sirius is a high-performing range of premium high-speed diesel engine oils. Specially engineered in a marine-formulated grade, Shell Sirius oils deliver outstanding performance for modern marine propulsion engines.

## Improving efficiency. Extending engine life.

Shell Sirius oils can help keep your engines cleaner and protected for longer. With a formulation optimised to improve the performance, efficiency and life of your engines, even in extreme temperature conditions, Shell Sirius oils can help lower your maintenance and fuel costs and increase your fleet reliability. Shell Sirius oils are approved by a wide array of leading engine manufacturers.

## Marine expertise

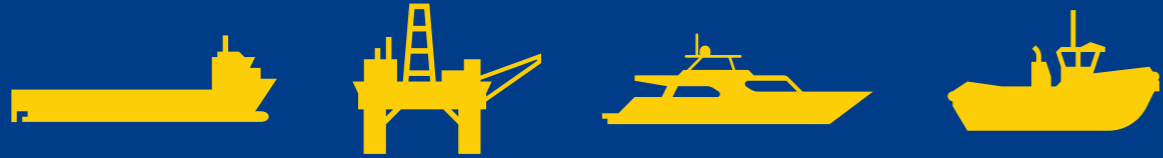
At Shell Marine, we're here to make your voyages more efficient, predictable and cleaner. With over 100 years of experience of helping customers get the best out of their fleets, we understand how to help your fleet operate smoothly and reliably with the highest safety standards and quality products.



## THE SIRIUS RANGE

High performance. Outstanding protection.

# SHELL SIRIUS S4 15W-40



This high-performance premium engine oil is designed to meet the demands of a wide variety of high-speed marine diesel engines operating under a range of conditions.

Providing outstanding protection against engine corrosion and wear, it improves engine cleanliness and oil durability and is suitable for marine diesel engines burning distillate fuels with a sulphur content of up to 0.5%.

### Specifications, Approvals & Recommendations

- ACEA E7, E5, E3
- API CI-4, CH-4, SL
- Caterpillar ECF-1A, ECF-2
- Cummins CES 20078, 20077, 20076, 20075, 20072, 20071
- Global DHD-1
- JASO DH-1
- MTU Category 2

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Suitable for

Offshore vessels and platforms, patrol boats and tug boats

## Key benefits



Superior acid and corrosion control to help keep engines clean and protected



Exceptional deposit control to improve engine reliability



Outstanding wear protection to help prolong engine life and efficiency

## Typical Physical Characteristics

PROPERTIES	METHOD		SHELL SIRIUS 15W-40	
SAE Viscosity Grade			15W-40	
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	105.1
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	14.3
Dynamic Viscosity	@-20°C	mPa*s	ASTM D5293	6 600
Viscosity Index			ASTM D2270	139
Density	@15°C	kg/m <sup>3</sup>	ASTM D4052	886
Flash Point PMCC			ASTM D93	205
Pour Point			ASTM D97	-39
TBN			ASTM D2896	10.8
Sulphated Ash			ASTM D874	1.44

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.



## THE SIRIUS RANGE

High performance. Outstanding protection.

# SHELL SIRIUS S4 20W-50



Sirius S4 20W-50 is a high-performing premium engine oil that is specially formulated to meet the challenges faced by a range of high-speed marine diesel engines under a variety of conditions.

Designed for marine engines that requires higher viscosity, Sirius S4 20W-50 offers superior protection against engine corrosion and wear, helping to improve engine and oil durability, thus driving efficiency.

### Specifications, Approvals & Recommendations

- API CI-4, CH-4
- ACEA E7
- JASO DH-1

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Suitable for

Offshore platforms, yachts, fishing boats and high-speed boats

## Key benefits



Superior engine corrosion and wear control to help keep engines clean and protected



Exceptional deposit control to improve engine reliability



Outstanding wear protection to help prolong engine life and efficiency

## Typical Physical Characteristics

PROPERTIES			METHOD	SHELL SIRIUS S4 20W-50
SAE Viscosity Grade				20W-50
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	169.1
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	18.5
Dynamic Viscosity	@-15°C	mPa s	ASTM D5293	8 250
Viscosity Index			ASTM D2270	123
Total Base Number	mgKOH/g		ASTM D2896	10.5
Sulphated Ash	%		ASTM D874	1.45
Density	@15°C	kg/l	ASTM D4052	0.886
Flash Point (COC)			ASTM D92	238
Pour Point			ASTM D97	-33

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.



## THE SIRIUS RANGE

High performance. Outstanding protection.

# SHELL SIRIUS S4 L 15W-40



Shell Sirius S4L 15W-40 is a high-performance premium engine oil formulated specially to meet the demanding requirements of a wide range of modern engines operating under various conditions.

Designed to offer superior protection against engine corrosion and wear, it helps to keep engine clean thus allowing them to run for longer hours with greater efficiency.

Its Low-SAPS additive technology helps to protect low emission marine diesel engine fitted with exhaust diesel particulate (DPF) with maximum sulphated ash content of 1.0%.

### Specifications, Approvals & Recommendations

- API CK-4, CJ-4, CI-4 Plus, CI-4, CH-4, SN
- ACEA E9, E7
- Caterpillar ECF-3, ECF-2
- Cummins CES 20086, 20081
- MTU Category 2.1
- JASO DH-2

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Suitable for

Offshore vessels and platforms, patrol boats and shipping vessels

## Key benefits



Compatible with low emissions engine



Outstanding wear protection to help prolong engine life and efficiency



Outstanding engine cleanliness to ensure engine reliability

## Typical Physical Characteristics

PROPERTIES			METHOD	SHELL SIRIUS S4 L 15W-40
SAE Viscosity Grade				15W-40
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	115
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	15.3
Viscosity Index			ASTM D2270	139
Density	@15°C	kg/l	ASTM D4052	0.876
Sulphated Ash			% maximum ASTM D874	1.0
Total Base Number			mg KOH/g ASTM D2896	10
Flash Point (COC)			°C ASTM D92	236
Pour Point			°C ASTM D97	-35

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.



## THE SIRIUS RANGE

High performance. Outstanding protection.

# SHELL SIRIUS S6 LM 10W-40



### Fully Synthetic High-Performance High-Speed Diesel Engine Oil

Sirius S6 LM 10W-40 is a fully synthetic high-performing premium high-speed diesel engine oil specially formulated to meet the needs of a high-speed diesel engine operating under a variety of conditions.

Designed to offer outstanding protection against engine corrosion and wear, Sirius S6 LM 10W-40 helps to keep engines clean and running efficiently and smoothly for longer hours. Its 'Low SAPS' additive technology also helps to protect low emission marine diesel engines fitted with exhaust diesel particulate filters (DPF) with sulphated ash content less than 1.0%.

Sirius S6 LM 10W-40 is approved by leading marine engine manufacturers such as MTU and Caterpillar.

### Specifications, Approvals & Recommendations

- ACEA E6, E9, E7
- API CK-4, CJ-4
- Caterpillar ECF-3, ECF-2
- Cummins CES 20086, 20081
- JASO DH-2
- MTU Category 3.1

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Suitable for

Cruise liners, yachts, high-speed engines and ferries

## Key benefits



Meets oil drain requirements, helping save on maintenance costs



Emissions system compatibility



Outstanding engine cleanliness with its unique detergent and dispersant additives technology



Superior wear protection to help prolong engine life and efficiency



Approved by leading engine manufacturers

## Typical Physical Characteristics

PROPERTIES			METHOD	SHELL SIRIUS S6 LM 10W-40
SAE Viscosity Grade				10W-40
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	96.8
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	14.5
Dynamic Viscosity	@-25°C	mPa s	ASTM D5293	6 080
Sulphated Ash			ASTM D874	0.95
Density	@15°C	kg/m <sup>3</sup>	ASTM D4052	849
Flash Point (COC)			ASTM D92	250
Pour Point			ASTM D97	-36
Total Base Number			ASTM D2896	12.9

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.





## SHELL SUPER MARINE

Shell Super Marine's multifunctional additive technology offers greater protection against corrosion; helps to reduce wear; controls sludge and deposits; and provides resistance to heat so that engines can run for longer and reliably.



**Protects against corrosion when engines are operating at higher temperatures**



**Additive technology helps to control piston deposits to ensure that engine cleanliness**



**Wear protection for longer engine life for turbo-charged engines**

# SHELL SUPER MARINE ENGINE OILS.

**BOOSTING EFFICIENCY. ENHANCING RELIABILITY.**

Today's shipping industry faces more pressure than ever to reduce operational costs, while sourcing high quality fuels and lubricants that meet the demands of advanced marine engines.

Engine lubrication plays a key role in promoting efficient and reliable marine operations, helping to cut maintenance costs and keep your vessels in service.

Shell Super Marine is a range of marine diesel engine oils formulated specifically for general high-speed marine engines.

## Protecting your engines for the long term

Shell Super Marine is designed for high-speed engine applications in vessels including ro-ro ferries, offshore vessels, dredgers, tugboats and fishing boats. Shell Super Marine engine oils are formulated to keep engines protected, clean and reliable.

## Marine expertise

At Shell Marine, we're here to make your voyages more efficient, predictable and cleaner. We have over 100 years of experience and know exactly how to help protect your fleet and ensure your vessel operates smoothly and reliably with the highest safety standards and quality products.



## THE SUPER MARINE RANGE

Boosting efficiency. Enhancing reliability.

# SHELL SUPER MARINE S2 20W-50



Shell Super Marine S2 20W-50 is a premium performance high-speed diesel engine oil specially designed to meet the requirements of marine diesel engines and it is recommended for older engines with a need for a higher viscosity lubrication protection to compensate for worn parts.

Its dispersant additive technology helps to protect against wear and deposits, and resists thickening by heat in most turbo-charged diesel engine by providing extended drain intervals for a more reliable and prolonged engine life.

Suitable for marine diesel engines burning distillate fuels with a sulphur content of up to 0.5%.

### Specifications, Approvals & Recommendations

- API CF-4

For a full list of equipment approvals and recommendations, please contact your Shell Technical Helpdesk<sup>1</sup> to be consistent with the rest of the brochures.

## Suitable for

High-speed propulsion engines in ro-ro ferries, dredgers, tugboats and fishing boats

## Key benefits



Higher viscosity to be used in older marine diesel engine for greater protection



Good engine cleanliness from sludge and piston deposits control for better engine reliability and efficiency



Superior protection against wear for prolonged engine life

## Typical Physical Characteristics

PROPERTIES			METHOD	SHELL SUPER MARINE S2 20W-50
SAE Viscosity Grade				20W-50
Kinematic Viscosity	@40°C	cSt	ASTM D445	162
Kinematic Viscosity	@100°C	cSt	ASTM D445	17.2
Viscosity Index			ASTM D2270	134
Dynamic Viscosity	@-15°C	mPa s	ASTM D5293	8 400
Density	@15°C	kg/l	ASTM D4052	0.893
Flash Point (COC)			ASTM D92	246
Pour Point			ASTM D97	-27

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.



## THE SUPER MARINE RANGE

Boosting efficiency. Enhancing reliability.

# SHELL SUPER MARINE S3 15W-40



Super Marine S3 15W-40 is a high-speed diesel engine oil designed to keep your marine engines running efficiently and reliably, to meet demanding engine requirements while operating under various conditions.

Protecting against corrosion, piston deposits and heat resistance on both naturally aspirated and turbo-charged marine diesel engines.

Super Marine S3 15W-40 helps to maintain good standards of engine cleanliness for improved engine and oil durability throughout the oil-drain interval. Its dispersant additive technology helps to control engine from sludge and piston deposits to ensure reliability and prolonged engine life.

Suitable for marine diesel engines burning distillate fuels with a sulphur content of up to 0.5%.

### Specifications, Approvals & Recommendations

- API CH-4, CG-4, CF-4, CF
- ACEA E2
- Caterpillar ECF-1-A
- Cummins CES 20076, 20071

For a full list of equipment approvals and recommendations, please contact your Shell Technical Helpdesk' to be consistent with the rest of the brochures.

## Suitable for

High-speed propulsion engines in offshore platforms, dredgers, tugboats and fishing boats.

## Key benefits



Enhanced protection against corrosion and thermal resistance for marine engine diesel engines operating at high piston temperature



Promotes good engine cleanliness from sludge and piston deposits control for better engine reliability and efficiency



Protection against wear for prolonged engine life

## Typical Physical Characteristics

PROPERTIES			METHOD	SHELL SUPER MARINE S3 15W-40
SAE Viscosity Grade				15W-40
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	105.1
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	14.3
Dynamic Viscosity	@-20°C	mPa s	ASTM D5293	6 600
Viscosity Index			ASTM D2270	139
Density	@15°C	kg/l	ASTM D4052	0.886
Flash Point (COC)			ASTM D92	230
Pour Point			ASTM D97	-36

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.





# SHELL MARINE 40 ENGINE OIL.

**ENHANCING CLEANLINESS. IMPROVING RELIABILITY.**

Today's shipping industry faces more pressure than ever to reduce operational costs, while sourcing high quality fuels and lubricants that meet the demands of advanced marine engines.

Engine lubrication plays a key role in promoting efficient and reliable marine operations, helping to cut maintenance costs and keep your vessels in service.

Shell Marine 40 high-speed diesel engine oil has been engineered for general high-speed marine engines.

## Advanced engine protection

Designed for high-speed engine applications in vessels ro-ro ferries, dredgers, tugboats and fishing boat. Shell Marine 40 is formulated to keep engines cleaner, better protected and more reliable, enabling longer and more efficient running.

## Marine expertise

At Shell Marine, we want to make your voyages more efficient, predictable and cleaner. We have over 100 years of experience and know exactly how to help protect your fleet and ensure your business operates smoothly and reliably with the highest safety standards and quality products.



# SHELL MARINE 40

Reducing costs. Improving fleet performance.

# SHELL MARINE 40



Shell Marine 40 is designed to meet the needs of a wide range of high-speed marine diesel engines operating under all conditions. Reacting to your engines' demands, it provides added protection, enabling them to work harder for longer which helps to reduce maintenance costs and improve vessel performance.

Shell Marine 40's additive technology helps protect against corrosion and wear throughout the oil-drain interval, control piston deposits and maintain good standards of engine cleanliness. It can be used in many aspirated and turbo-charged engines to provide protection and longer engine life so that engines can run efficiently and reliably.

### Specifications, Approvals & Recommendations

- API CF, CD

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

## Suitable for

High-speed propulsion engines in ro-ro ferries, dredgers, tugboats and fishing boats

## Key benefits



Good piston deposit control to keep engine clean and reliable



Protection against engine corrosion under higher operating temperatures for both naturally aspirated and turbo-charged engines



Reduces wear and prolongs engine life

## Typical Physical Characteristics












PROPERTIES			METHOD	SHELL MARINE 40	
SAE Viscosity Grade				40	
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	13.5	
Viscosity Index			ASTM D2270	102	
Density	@15°C	kg/m <sup>3</sup>	ASTM D4052	895	
Flash Point (COC)			°C	ASTM D92	250
TBN-E			mg KOH/g	ASTM D2896	10

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.



# WHICH SHELL HIGH-SPEED DIESEL ENGINE OIL MARINE GRADE IS FOR YOU?

FORWARD TOGETHER

	PRODUCT GRADE	KEY TECHNICAL FEATURES	WHAT IS IT & BENEFITS	 CORROSION PROTECTION	 ENGINE CLEANLINESS	 WEAR PROTECTION	 EXHAUST FILTER	APPLICATION
<b>SHELL SIRIUS</b>  High-Speed. High-Performance.	<b>Sirius S6 LM 10W-40</b>	<ul style="list-style-type: none"> <li>Low-SAPS additive technology</li> <li>Superior additive booster</li> <li>API CK-4</li> <li>DPF with sulphated ash content &lt;1.0%</li> </ul>	<ul style="list-style-type: none"> <li>Meets oil drain requirements, helping save on maintenance costs</li> <li>Emissions system compatibility</li> <li>Outstanding engine cleanliness with its unique detergent and dispersant additives technology</li> <li>Superior wear protection to help prolong engine life and efficiency</li> <li>Approved by leading engine manufacturers</li> </ul>	★★★	★★★★★	★★★★★	★★★	
	<b>Sirius S4 20W-50</b>	<ul style="list-style-type: none"> <li>API CI-4</li> <li>0.5% sulphur content</li> </ul>	<ul style="list-style-type: none"> <li>Superior engine corrosion and wear control to help keep engines clean and protected</li> <li>Exceptional deposit control to improve engine reliability</li> <li>Outstanding wear protection to help prolong engine life and efficiency</li> </ul>	★★	★★★	★★		
	<b>Sirius S4 L 15W-40</b>	<ul style="list-style-type: none"> <li>Low-SAPS additive technology</li> <li>Sulphated ash content of 1.0%</li> <li>API CK-4</li> <li>0.5% sulphur content</li> </ul>	<ul style="list-style-type: none"> <li>Compatible with low emissions engine</li> <li>Outstanding wear protection to help prolong engine life and efficiency</li> <li>Outstanding engine cleanliness to ensure engine reliability</li> </ul>	★★	★★★	★★★★	★★	
	<b>Sirius S4 15W-40</b>	<ul style="list-style-type: none"> <li>API CI-4</li> <li>0.5% sulphur content</li> </ul>	<ul style="list-style-type: none"> <li>Superior acid and corrosion control to help keep engines clean and protected</li> <li>Exceptional deposit control to improve engine reliability</li> <li>Outstanding wear protection to help prolong engine life and efficiency</li> </ul>	★★	★★★	★★		
<b>SHELL SUPER MARINE</b>  Boosting Efficiency. Enhancing Reliability.	<b>Super Marine S3 15W-40</b>	<ul style="list-style-type: none"> <li>API CH-4</li> <li>0.5% sulphur content</li> </ul>	<ul style="list-style-type: none"> <li>Enhanced protection against corrosion and thermal resistance for marine engine diesel engines operating at high piston temperature</li> <li>Promotes good engine cleanliness</li> <li>Protection against wear for prolonged engine life</li> </ul>	★★	★★	★★		
	<b>Super Marine S2 20W-50</b>	<ul style="list-style-type: none"> <li>API CF-4</li> </ul>	<ul style="list-style-type: none"> <li>Higher viscosity to be used in older marine diesel engine for greater protection</li> <li>Good engine cleanliness from sludge and piston deposits control for better engine reliability and efficiency</li> <li>Superior protection against wear for prolonged engine life</li> </ul>	★★	★	★		
<b>SHELL MARINE 40</b>  Enhancing Cleanliness. Improving Reliability.	<b>Marine 40</b>	<ul style="list-style-type: none"> <li>API CF &amp; CD</li> </ul>	<ul style="list-style-type: none"> <li>Good piston deposit control to keep engine clean and reliable</li> <li>Protection against engine corrosion under higher operating temperatures for both naturally aspirated and turbo-charged engines</li> <li>Reduces wear and prolongs engine life</li> </ul>	★★	★	★		





## CHOOSE SHELL MARINE WITH CONFIDENCE

As a marine specialist, Shell is a brand you can trust. We have over 100 years of experience in the marine industry, a global supply chain of more than 30 lubricant oil blending plants and a network of over 700 ports across 62 markets.

We're committed to supporting you and your fleet with expert advice and quality marine lubricants and fuels, all delivered to high environmental and safety standards.





**FIND OUT MORE ABOUT SHELL MARINE  
HIGH SPEED DIESEL ENGINE OIL**

To discover the engine and performance benefits of Shell Marine High Speed Diesel Engine Oil, speak to your Shell representative.

For a full list of equipment approvals and recommendations, please contact your local Shell Technical Helpdesk.

Discover more at [www.shell.com/marine](http://www.shell.com/marine)

SHELL MARINE. FORWARD TOGETHER.