



PORSCHE



Everything you need to know about oil

Porsche and Mobil 1™ –
a partnership for maximum performance.

A perfectly harmonised blend for every Porsche.

Engine oil is crucial for ensuring functionality, performance and value retention, especially in high-performance vehicles such as a Porsche.

After testing many engine oils on the racetrack and in original equipment, we have chosen Mobil 1™ as our worldwide oil partner. Mobil 1™ high-performance oils ideally suit the requirements of a Porsche engine, for petrol and diesel vehicles, on the racetrack or the road. Mobil 1™ offers the perfect mix of high-quality base oils

and additives for every Porsche. On the following pages you will find an overview of all Mobil 1™ oils approved by Porsche, along with key specifications and benefits. The wiki contains facts worth knowing about oil, summarised in a compact form.



Mobil 1™ FS 0W-40

Porsche Specification: A40

The proven classic in the legendary 0W-40 segment ensures maximum long-term protection and ultimate engine cleanliness. This high-performance engine oil is recommended by Porsche for all engine generations that require A40 oil specification (except diesel and hybrid engines, as well as engines in the Classic segment) and is perfectly suited for older high-performance engines without particulate filters.



BENEFITS

- Superior wear protection, even under extreme conditions
- High cleaning power for protection against deposits and sludge formation
- Optimally suited to high-performance engines
- Also approved for many engines of other brands

MARKETS

worldwide

SPECIFICATIONS

Porsche A40,
VW 50200/50500

VISCOSITY

0W-40

Mobil 1™ FS x1 5W-50

Porsche Specification: A40

Mobil 1™ FS x1 5W-50 provides maximum wear protection for high-mileage engines, even under extreme driving conditions, and can contribute to low oil consumption. It is the best choice for high-speed engines that require A40 specification oils (except diesel, hybrid and classic engines) – especially older high-performance engines without particulate filters.



BENEFITS

- Suitable for motorsport and racing vehicles
- Low evaporation loss contributes to low oil consumption
- High engine cleanliness and protection against sludge formation
- Also approved for many engines of other brands

MARKETS

worldwide

SPECIFICATIONS

Porsche A40

VISCOSITY

5W-50

Mobil 1™ ESP x2 0W-20

Porsche Specification: C20

Mobil 1™ ESP x2 0W-20 is an advanced low-viscosity engine oil specifically formulated to meet the Porsche C20 oil specification and optimised for maximum fuel efficiency. It offers exemplary wear protection and outstanding engine cleanliness. Owing to its specially adjusted additives, it protects particulate filters from premature ageing.



C20

BENEFITS

- Outstanding fuel efficiency owing to its active friction-reducing additives
- High engine cleanliness and protection against sludge formation
- Excellent ageing stability for longer oil change intervals
- Optimum engine protection from the first rotation thanks to low viscosity
- Also approved for many engines of other brands

MARKETS

worldwide

SPECIFICATIONS

Porsche C20,
VW 50800/50900

VISCOSITY

0W-20

Mobil 1™ ESP 0W-30

Porsche Specification: C30

Mobil 1™ ESP 0W-30 offers the excellent cleaning power you expect from the Mobil 1™ ESP product family, combined with high wear protection. With fewer ash-generating components, the oil ensures maximum longevity of exhaust gas after-treatment systems. Specially selected additives reduce the risk of LSPI pre-ignition in turbo engines. This high-performance engine oil is the perfect choice for all Porsche models that require C30 specification engine oil.



C30

BENEFITS

- Full compatibility with modern particle filters and reduction of particle build-up
- High cleaning performance for a long engine life
- Improved friction properties combined with optimum wear protection
- Also approved for many engines of other brands

MARKETS

worldwide

SPECIFICATIONS

Porsche C30,
VW 50400/50700

VISCOSITY

0W-30

Mobil 1™ ESP x3 0W-40

Porsche Specification: C40

Mobil 1™ ESP x3 0W-40 is specially formulated for high-performance sports car engines. It protects the engine from wear, even in extreme situations, and with its innovative additives it provides fuel efficiency on a par with thinner 0W-30 oils. The first 0W-40 engine oil is specifically suited to vehicles with particulate filters.



BENEFITS

- Active cleaning additives prevent deposits and sludge formation
- Optimum high-temperature properties reduce oil ageing
- Excellent low-temperature properties for better cold starts
- Suitable for all engines with particulate filters
- Approved for high-performance engines from other brands
- Also suitable for motorsport and racing vehicles

MARKETS

worldwide

SPECIFICATIONS

PORSCHE C40,
VW 51100

VISCOSITY

0W-40

Every oil at a glance

SPECIFICATION	SAE VISCOSITY GRADES	MOBIL 1™ PRODUCT	MODELS
Porsche A40	0W-40		<p>Porsche MY1997 up to and including MY2018 911 (bis MJ19), Boxster, Cayman (bis MJ19), 918 Spyder, Macan S (I), Macan Turbo (I), Cayenne S, Cayenne S Transsyberia, Cayenne GTS, Cayenne Turbo, Cayenne Turbo S, Panamera (G1), Panamera 4 (G1), Panamera S (G1), Panamera 4S (G1), Panamera GTS (G1), Panamera Turbo (G1), Panamera Turbo S (G1)</p>
	5W-40	Mobil 1™ FS 0W-40	<p>Porsche MY1997 up to and including MY2018 (China only) (Group II) Macan (I), Cayenne, Cayenne S Hybrid, Cayenne S E-Hybrid, Panamera 4 E-Hybrid, Panamera S Hybrid, Panamera S E-Hybrid</p>
	5W-50	Mobil 1™ FS x1 5W-50	<p>Porsche MY1997 up to and including MY2018 (Dom. Rep. only) (Group II) Macan S Diesel (I), Cayenne Diesel, Cayenne S Diesel, Panamera Diesel</p> <p>Porsche Type 971 MY2016 up to and including MY2020 (Group II) Panamera, Panamera 4, Panamera 4S, Panamera/4 PHEV</p> <p>Porsche Type 9YA MY2018 up to and including MY2020 Cayenne/Coupé, Cayenne S/Coupé, Cayenne PHEV/Coupé (China), Cayenne PHEV (RdW)</p> <p>Porsche Type 958, Macan II MY2018 up to and including MY2020 Macan, Macan S, Macan GTS, Macan Turbo</p> <p>Porsche Type 991 II, Carrera MY2019 up to and including MY2020 (Without GPF/DPF) Carrera, Carrera 4, Carrera S, Carrera 4S, Carrera GTS, Carrera 4 GTS, Turbo, Turbo S, GT3, GT3 RS, GT2 RS, Speedster</p>

Country group allocation up to model year 2020

- Group I Andorra, Azerbaijan, Australia, Albania, Argentina, Belarus, Belgium, Bosnia-Herzegovina, Brazil, Bulgaria, Canada, China, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Faroe Islands, French Guiana, Finland, France, Georgia, Germany, Greece, Greenland, Guadeloupe, Hong Kong, Hungary, Ireland, Iceland, Israel, Italy, India, Japan, Kazakhstan, Croatia, Latvia, Lithuania, Liechtenstein, Luxembourg, Malta, Macedonia, Martinique (French Antilles), Malaysia, Mexico, Monaco, Montenegro, Moldova, New Zealand, Netherlands, Norway, Austria, Poland, Portugal, Reunion, Romania, Russia, San Marino, Switzerland, Sweden, Serbia, Slovakia, Slovenia, Spain, South Africa, South Korea, Taiwan, Turkey, United Kingdom, Thailand, Tunisia, USA, Ukraine, Vatican
- Group II Abu Dhabi, Algeria, Armenia, Bahamas, Bahrain, Bolivia, Brunei, Cayman Islands, Colombia, Costa Rica, Curacao, Chile, Dominican Republic, Dubai, Ecuador, French Polynesia, Guatemala, Ghana, Haiti, Honduras, Indonesia, Iraq, Iran, Jamaica, Jordan, Kenya, Kuwait, Laos, Lebanon, Mauritius, Macau, Morocco, Mongolia, Myanmar, New Caledonia, Nicaragua, Nigeria, Oman, Pakistan, Panama, Paraguay, Peru, Puerto Rico, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Swaziland, Syria, Tanzania, Trinidad and Tobago, Uruguay, Vietnam, Yemen

Every oil at a glance

SPECIFICATION	SAE VISCOSITY GRADES	MOBIL 1™ PRODUCT	MODELS
Porsche C20	0W-20	Mobil 1™ ESP 0W-20	<p>Porsche Type 971 MY2016 up to and including MY2020 Panamera, Panamera 4</p> <p>Porsche Type 9YA MY2018 up to and including MY2020 Cayenne/Coupé, Cayenne PHEV/Coupé (China), Cayenne PHEV/Coupé (RdW)</p> <p>Porsche Type 95B, Macan II MY2018 up to and including MY2020 Macan, Macan S</p> <p>Porsche Type 9YA from MY2021 Cayenne/Coupé, Cayenne PHEV/Coupé (China), Cayenne PHEV/Coupé (RdW)</p> <p>Porsche Type 95B, Macan II from MY2021 Macan, Macan S</p>
Porsche C30	5W-30	Mobil 1™ ESP 5W-30	<p>Porsche MY1997 up to and including MY2018 Macan (I), Cayenne, Cayenne S Hybrid, Cayenne S E-Hybrid, Panamera 4 E-Hybrid, Panamera S Hybrid, Panamera S E-Hybrid, Macan S Diesel (I), Cayenne Diesel, Cayenne S Diesel, Panamera Diesel</p> <p>Porsche Type 971 MY2016 up to and including MY2020 Panamera, Panamera 4, Panamera 4S, Panamera S Diesel, Panamera/4 PHEV</p> <p>Porsche Type 9YA MY2018 up to and including MY2020 Cayenne S/Coupé</p> <p>Porsche Type 95B, Macan II, MY2018 up to and including MY2020 Macan GTS, Macan Turbo</p>
	0W-30	Mobil 1™ ESP 0W-30	
	0W-30	Mobil 1™ ESP 0W-30	<p>Porsche Type 971 from MY2021 Panamera/4, Panamera 4S/4S PHEV, Panamera 4 PHEV</p> <p>Porsche Type 9YA from MY2021 Cayenne S/Coupé</p> <p>Porsche Type 95B, Macan II from MY2021 Macan GTS, Macan Turbo</p>

Country group allocation up to model year 2020

- Group I Andorra, Azerbaijan, Australia, Albania, Argentina, Belarus, Belgium, Bosnia-Herzegovina, Brazil, Bulgaria, Canada, China, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Faroe Islands, French Guiana, Finland, France, Georgia, Germany, Greece, Greenland, Guadeloupe, Hong Kong, Hungary, Ireland, Iceland, Israel, Italy, India, Japan, Kazakhstan, Croatia, Latvia, Lithuania, Liechtenstein, Luxembourg, Malta, Macedonia, Martinique (French Antilles), Malaysia, Mexico, Monaco, Montenegro, Moldova, New Zealand, Netherlands, Norway, Austria, Poland, Portugal, Reunion, Romania, Russia, San Marino, Switzerland, Sweden, Serbia, Slovakia, Slovenia, Spain, South Africa, South Korea, Taiwan, Turkey, United Kingdom, Thailand, Tunisia, USA, Ukraine, Vatican
- Group II Abu Dhabi, Algeria, Armenia, Bahamas, Bahrain, Bolivia, Brunei, Cayman Islands, Colombia, Costa Rica, Curacao, Chile, Dominican Republic, Dubai, Ecuador, French Polynesia, Guatemala, Ghana, Haiti, Honduras, Indonesia, Iraq, Iran, Jamaica, Jordan, Kenya, Kuwait, Laos, Lebanon, Mauritius, Macau, Morocco, Mongolia, Myanmar, New Caledonia, Nicaragua, Nigeria, Oman, Pakistan, Panama, Paraguay, Peru, Puerto Rico, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Swaziland, Syria, Tanzania, Trinidad and Tobago, Uruguay, Vietnam, Yemen

Every oil at a glance

SPECIFICATION	SAE VISCOSITY GRADES	MOBIL 1™ PRODUCT	MODELS
Porsche C40	0W-40 5W-40	Mobil 1™ ESP x3 0W-40	<p>Porsche Type 971 MY2016 up to and including MY2020 Panamera GTS, Panamera Turbo, Panamera Turbo S PHEV</p> <p>Porsche Type 9YA MY2018 up to and including MY2020 Cayenne GTS, Cayenne Turbo/Coupé, Cayenne Turbo S PHEV</p> <p>Porsche Type 991 II, Carrera MY2019 up to and including MY2020 Carrera S, Carrera 4S, Carrera GTS, Carrera 4 GTS, GT3 RS, Speedster</p> <p>Porsche Type 982, 718 MY2019 up to and including MY2020 718 Boxster, 718 Cayman, 718 Boxster S, 718 Cayman S, 718 Boxster GTS, 718 Cayman GTS, 718 GT4, 718 Boxster 6, 718 Cayman 6, 718 Spyder, 718 Boxster T, 718 Cayman T</p> <p>Porsche Type 992, Carrera MY2019 up to and including MY2020 Carrera, Carrera 4, Carrera S, Carrera 4S, Carrera GTS, Carrera 4 GTS, Turbo, Turbo S, GT3, GT3 RS, GT2 RS</p>
	0W-40	Mobil 1™ ESP x3 0W-40	<p>Porsche Type 971 from MY2021 Panamera GTS, Panamera Turbo S PHEV, Panamera Turbo S</p> <p>Porsche Type 9YA from MY2021 Cayenne GTS/Coupé, Cayenne Turbo/Coupé, Cayenne Turbo S PHEV/Coupé</p> <p>Porsche Type 982, 718 from MY2021 718 Boxster, 718 Cayman, 718 Boxster S, 718 Cayman S, 718 GT4, 718 Spyder, 718 Boxster GTS 4.0, 718 Cayman GTS 4.0, 718 Boxster T, 718 Cayman T</p> <p>Porsche Type 992, Carrera from MY2021 Carrera, Carrera 4, Carrera S, Carrera 4S, Carrera GTS, Carrera 4 GTS, Turbo, Turbo S, GT3</p>

Country group allocation up to model year 2020

- Group I Andorra, Azerbaijan, Australia, Albania, Argentina, Belarus, Belgium, Bosnia-Herzegovina, Brazil, Bulgaria, Canada, China, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Faroe Islands, French Guiana, Finland, France, Georgia, Germany, Greece, Greenland, Guadeloupe, Hong Kong, Hungary, Ireland, Iceland, Israel, Italy, India, Japan, Kazakhstan, Croatia, Latvia, Lithuania, Liechtenstein, Luxembourg, Malta, Macedonia, Martinique (French Antilles), Malaysia, Mexico, Monaco, Montenegro, Moldova, New Zealand, Netherlands, Norway, Austria, Poland, Portugal, Reunion, Romania, Russia, San Marino, Switzerland, Sweden, Serbia, Slovakia, Slovenia, Spain, South Africa, South Korea, Taiwan, Turkey, United Kingdom, Thailand, Tunisia, USA, Ukraine, Vatican
- Group II Abu Dhabi, Algeria, Armenia, Bahamas, Bahrain, Bolivia, Brunei, Cayman Islands, Colombia, Costa Rica, Curacao, Chile, Dominican Republic, Dubai, Ecuador, French Polynesia, Guatemala, Ghana, Haiti, Honduras, Indonesia, Iraq, Iran, Jamaica, Jordan, Kenya, Kuwait, Laos, Lebanon, Mauritius, Macau, Morocco, Mongolia, Myanmar, New Caledonia, Nicaragua, Nigeria, Oman, Pakistan, Panama, Paraguay, Peru, Puerto Rico, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Swaziland, Syria, Tanzania, Trinidad and Tobago, Uruguay, Vietnam, Yemen

Oil Wiki

Everything you need to know about oil

Why do vehicles need engine oil?

Engine oil lubricates, cools and protects internal combustion engines from premature wear. It reduces mechanical friction on moving parts, such as the piston. It cools parts that become hot during use and are not reached by the coolant. It also protects against corrosion by neutralising acids produced during combustion. Engine oil can also perform other functions including cleaning ash and soot from the engine and absorbing metallic abrasion and other impurities that form during use.

Different engines require different engine oils. The oils are precisely matched to the individual requirements of the vehicle manufacturers. It is important for end users to use only oils approved by the manufacturer, otherwise they risk voiding their vehicle's warranty. Most manufacturers have an 'approved list' of specific lubricants that conform to a stringent set of requirements; a few manufacturers instead specify general oil qualities based on the standards of institutions such as the ACEA (European Automobile Manufacturers' Association) or API (American Petroleum Institute).

What do abbreviations like OW-40 mean?

The SAE J300 standard regulates the naming of engine oils and categorises them according to their low-temperature (e.g. OW) and high-temperature properties (e.g. 40). In the case of so-called multi-grade oils (e.g. 10W-60), the first number indicates the lowest temperature at which the oil can still be reliably pumped to achieve an optimal cold start of the engine. The lower the number, the thinner the oil at sub-zero temperatures and the better the cold

start properties. The SAE standard separates engine oils into the following classes: OW, 5W, 10W, 15W, 20W and 25W.

The second figure indicates the flowability of the oil at 100 °C. The higher the number, the thicker the oil and the better the wear protection at engine operating temperature. The SAE classes are: 8, 12, 16, 20, 30, 40, 50 and 60.

For example: a 10W-60 is a fairly thick oil that offers strong wear protection. Oils in the OW-12 range, on the other hand, are optimised to offer low-friction engine operation without neglecting other important properties.

How do I know which engine oil is right for a given vehicle?

The exact oil specification incl. viscosity class (e.g. Porsche C40) can be found in the vehicle manual. Approved engine oils must be selected according to these specifications to ensure smooth engine operation and to keep the vehicle under warranty.

Is it acceptable to mix engine oils?

In general, engine oils are formulated to be mixable with each other. In a few cases, differences in additive technologies can lead to a decrease in the performance of the engine oil after sustained use. If oil has to be unexpectedly refilled and no identical product is available, an alternative product approved by the manufacturer should be used first.



Why does oil need to be changed? How often does this occur?

Engine oil is a highly complex product that performs many different functions in the engine. It is critical to enabling the engine and exhaust after-treatment system to perform to their full potential for as long as possible. For example, the oil keeps the interior of the engine clean by absorbing combustion residues that could otherwise settle and, in extreme cases, cause engine damage. It also ensures that the fuel economy advertised by the engine manufacturer can be maintained.

Oil Wiki

Everything you need to know about oil

In addition to these combustion residues, engine oils are permanently exposed to influences that affect their chemical-physical properties over time, such as dirt ingress from outside, high operating temperatures, water and fuel ingress in stop-start traffic, and high mechanical loads in racetrack operation. All this can cause the oil to 'wear out' over time, making it less and less able to ensure engine performance and longevity. A timely oil change is recommended to prevent issues from arising.



Most vehicles display the remaining time and distance until the next oil change in the vehicle's on-board computer. This operates on a flexible basis, continuously updating according to actual usage. On some models, a fixed mileage or running time (e.g. 30,000 km or two years) is specified. These values depend on the vehicle and can be found in the manual.

Can oil additives be used?

It is not recommended to use oil additives of any kind. Mobil 1™ engine oils are a complex combination of ingredients in the correct proportions. These have been formulated over years to ensure that the end product fulfils its role and meets the vehicle's requirements across the entire oil change interval. Even the smallest deviations in composition, for example through the addition of oil additives, can affect the performance of the engine or the service life of the exhaust after-treatment system. In extreme cases, the manufacturer's warranty will be voided.

Do older vehicles need special oils?

Many older engines require a specific form of lubricant. Engine oils with light additives may be a better choice for older models compared to modern-day vehicles. If in doubt, oils with a manufacturer's approval (e.g. Porsche Classic) are always the safest bet.

Why do electric vehicles do not need engine oil?

Electric motors run largely without contact and wear and are therefore protected by a different set of products that perform an equivalent function. For example, they require special cooling fluids for batteries or special lubricants for gearboxes.

How does Mobil 1™ protect the engine?

High-performance engines need to deal with everything: not just race conditions, but also stop-start traffic, short journeys and low temperatures. Thanks to their complex, precisely balanced formulation, Mobil 1™ engine oils keep the most important engine components such as pistons, cylinders, bearings or camshafts clean and protect them from premature wear. The low-friction properties of a Mobil 1™ engine oil lead to efficient and low-emission engine operation.

Which engine oil should be used for hybrid vehicles?

Currently, there are very few engine oils formulated specifically for hybrids. It's best to consult the manual and the manufacturer's oil release list – these will help with selecting of engine oils for a particular vehicle. Mobil 1™ engine oils approved by Porsche are generally preferable, even in hybrid vehicles.

Oil Wiki

Everything you need to know about oil

Which is better: mineral oil or synthetic oil?

Synthetic oils are generally more resistant to ageing and have better flow properties (for example, they thicken less when temperatures decrease). Semi-synthetic engine oils are often on a par with fully synthetic ones. However, it's worth pointing out that modern engine oils usually consist of a mix of oils, which can be of mineral, semi-synthetic or fully synthetic origin. In addition, modern engine oils contain a number of additives to achieve the desired performance in the engine.

What is important is the manufacturer's approval for the product, rather than the oil base. This is the only way to ensure that all the engine manufacturer's requirements have been met.

What does 'Longlife oil' mean?

Many manufacturers now specify extended change intervals, for example up to two years or 30,000 km. Longlife oils make this possible. They contain selected chemical components that make the oils more resistant to ageing and viscosity.

Do oil filters need changing, and how often?

Sooner or later, every engine produces fine particles that are pumped through the oil circuit. The oil filter removes these 'wear particles' and other solid impurities from the oil to prevent additional wear in the engine. The oil filter should ideally be replaced every time the oil is changed.

Why do petrol and diesel vehicles with particulate filters need special engine oils?

During combustion, a tiny amount of oil is always burnt and emitted through the exhaust tract. This produces a large amount of ash, which can impair the cleaning effect of catalytic converters and particulate filters and, in extreme cases, lead to failure of these systems. For this reason, almost all modern engine oils are developed with fewer ash-generating additives, making them compatible with exhaust treatment systems with particle filters. All engine oils that meet the Porsche C20, C30 and C40 specifications are formulated for engines with particulate filters, protecting the exhaust after-treatment system from premature ageing and ensuring that the vehicle continues to meet legal emission requirements for years to come.

What are ACEA and API specifications?

These specifications are minimum standards set by the European (ACEA) or North American (API) manufacturers' associations. They define the standard quality of engine oils based on the requirements of the automobile manufacturers in that region. As a rule, they are a minimum starting-point for manufacturer-specific approvals and requirements, some of which are significantly higher than those of the ACEA/API.





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