



MICHELIN AT THE PARIS MOTORSHOW 2016

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LONG-LASTING PERFORMANCE MICHELIN TIRES OFFER THE SAME PERFORMANCE FROM THE FIRST MILE TO THE LAST

Clean transport and road safety are everyone's concern. While some manufacturers are lobbying for tires to be replaced as soon as the tread depth reaches 3 or 4 mm, Michelin, the world's leading tire company, maintains that the current legal limit of 1.6 mm is perfectly suited to the challenges of modern motoring.

Michelin markets tires that ensure optimum safety throughout the tire's longer lifespan, and save fuel due to limited rolling resistance. This is the only way of limiting excessive raw material consumption and carbon dioxide emissions, whilst allowing motorists to use their tires longer in total safety.

Michelin's winter tires, such as the Pilot Alpin with its full-depth 3D sipes or the MICHELIN CrossClimate, a summer tire also approved for winter use in regions where winter tires are mandatory, guarantee maximum effectiveness right down to the statutory minimum of 1.6 mm.

Michelin reaffirms its opposition to a change in the legislation on this matter, for four reasons:

1–Safety

- Current legislation, which dates back to 1989, was based on performance levels at the time. In view of the progress made in the tire world, the majority of products on the market today are logically superior.
- At present, no official statistics establish a link between an increase in the number of accidents and the fact that the tire tread on the vehicles involved was less than 4 mm deep.
- Braking distances depend on a wide range of factors. The braking system, ABS sensors, road surface texture, weather (humidity and temperature), tire pressure and temperature, and the driver's actions all play a significant part alongside the tire's intrinsic qualities.
- When new, tires can already exhibit large differences in performance between brands and manufacturers, models and dimensions. Premium tires may, with a tread depth of 1.6 mm, be more efficient than a new budget tire.
- It is known that a new tire on a vehicle does not really exist. In its first miles, the tire starts to wear. Michelin ensures all of its tires offer a high level of performance across all criteria to the wear indicator at 1.6 mm, that is to say after several years and tens of thousands of miles.

2–Cost

- Replacing tires as soon as the tread depth reaches 3 or 4 mm inevitably means doing so more frequently, which represents a significant increase in running costs for the motorist. This is unacceptable at a time when the opposite should be true as a result of the progress made in tire technology, even before improvements to the vehicle itself are considered.



- Changing a tire with 3 or 4 mm of tread remaining, instead of 1.6 mm, equates roughly to an extra tire per car every two years. It is a scenario that motorists would not be prepared to entertain.
- It would also have a notable impact on professionals and corporate fleets as a result of the higher total cost of ownership. The monthly payments associated with contract hire and leasing schemes would rise, as would the terms of the increasingly popular PCP (personal contract purchase) schemes for private buyers.

3–Ecology

- Numerous materials and a certain amount of energy are required to make a tire. The more material used, the greater the impact will be on the environment. Tires should therefore be replaced as late as possible to avoid overconsumption of raw materials and the energy used in manufacturing them.
- Rolling resistance, responsible for 20% of a cars' fuel (or electric power) consumption, improves with wear. Michelin considers that replacing tires prematurely would see annual fuel consumption rise by 900 million liters, and carbon dioxide emissions by 3 million tonnes – or 9 million if we were to add the loss of material caused by premature tire replacement. This is equivalent to the annual CO₂ emissions of the city of Birmingham, the second city of the UK.
- Recycling is also heavy on energy consumption and the more material we have to recycle, the lower our overall sustainability performance. Increasing the legal minimum tread depth Europe-wide from 1.6 mm to 3 mm would amount to 1.5 million tonnes of raw materials wasted annually, equating to an energy demand of 290 million tonnes of crude oil, that is to say, more than the annual production of Mexico and Venezuela combined.

Michelin tires offer the best cost/lifespan ratio on the market and guarantee buyers the highest return on investment. Impeccable performance and safety levels are maintained right down to the last mile.

NB: European regulations, by Directive 89 /459 / EEC transposed in France by the decree of 18 September 1991 amending the order of 29 July 1970 on the characteristics and of motor vehicle tires and use conditions their trailers defines as such the legal tread depth for tires of vehicles belonging to international categories M1 (cars) and N1 (vans). It is considered that this tread depth is sufficient to remove the film of water present on a potentially wet road, and ensure the safety of all drivers in all conditions.

MICHELIN CrossClimate+ LONG-LASTING TOP-LEVEL PERFORMANCE IN SUMMER AND WINTER

To see the positive impact the CrossClimate range has made on the tire world, let's go back to May 2015 when Michelin combined the best in summer and winter tire technology.

The first-generation MICHELIN CrossClimate tire was the very first summer tire to receive winter certification, identifiable by the 3PMSF (3 Peaks Mountain Snow Flake) logo on its sidewall – a guarantee of performance in winter conditions.



The MICHELIN CrossClimate was then marketed across Europe with immediate success. Its innovative compound contains new elastomers and a special silica, thinner than usual, which improves the stability of the tire's characteristics across a wide outdoor temperature range. CrossClimate tires retain their properties in summer heatwaves when the air temperature hits the 25°C mark, and the road surface is hotter still, and also when the thermometer shows less than 7°C. The rubber optimizes the grip in all of these conditions.

The revolutionary compound developed by Michelin ensures the tread retains optimum elasticity, regardless of outdoor temperature, to guarantee better grip. Michelin test engineers have covered over 5 million kilometers in temperatures ranging from -30°C to +40°C to produce a tire that delivers such outstanding performance.

The MICHELIN CrossClimate was ranked first in the 2016 ADAC tire test published on 22 September compared to competitors' All Season tires. This demonstrates its performance as a summer tire certified for winter use. It was particularly commended for its performance in dry and wet conditions, fuel consumption and longevity¹.

The MICHELIN CrossClimate+ goes a step further

In February 2017, Michelin will launch MICHELIN CrossClimate+ which will continue to combine the best of both summer and winter tire worlds with long-lasting performance.

All tires' performance levels change the more miles they cover. While some criteria – such as rolling resistance – may improve, others get worse over time;

¹ADAC 2016 Tire Test – All Season 205/55R16 V.

grip on wet or snow-covered roads being a typical example. “The MICHELIN CrossClimate+ confirms its performance on dry surfaces and its positioning as a premium summer tire. But it goes even further by guaranteeing optimum traction on snow-covered roads from the first mile to the last.

In winter, and particularly in snowy conditions, vehicles fitted with MICHELIN CrossClimate+ tires will comfortably reach their destination. Brand new CrossClimate+ tires offer the same level of traction (on snow) as their main competitors and their performance changes very little, mile after mile, while a significant drop is seen on rival premium A/S models,” as the graph below illustrates¹.



Michelin has always looked towards innovative solutions when taking up the challenge of improving tire performance from the first mile to the last. The new MICHELIN CrossClimate+ is a perfect illustration of the Michelin Group’s technological superiority. By fitting their vehicle with MICHELIN CrossClimate+ tires, motorists can be sure of outstanding performance and traction on snow from the first mile to the last, while making a stand against the planned obsolescence of some tires.

MICHELIN CrossClimate+ for all motorists

Many owners do not have the logistical or financial capacity, or indeed the inclination, to switch their car’s tires twice a year – especially in regions where snow and ice are rare occurrences. In reality, 65% of European motorists use summer tires all year round and are not necessarily aware of the added safety that fitting tires suited to the winter season represents. Others who are either better informed or who live in countries or regions where there is a legal obligation to do so have adopted the habit of replacing their summer tires with winter rubber in November, and swap back again when spring returns. But the same questions arise again and again:

- Is it the right time to change?
- Will my winter tires give me the necessary grip and traction right through to spring?

MICHELIN CrossClimate+ is the obvious choice in every case. It not only meets the demands of drivers attracted to the safety of a summer tire (grip on

¹Snow acceleration tests conducted at Michelin’s request by TestWorld in July 2016 on dimension 205/55R16 fitted to a VW Golf 7, compared with 2 premium All Season competitors.

cornering, braking distance on dry or wet surfaces, feeling, handling), it also offers comparable performance to winter tires on wet, icy or snow-covered roads. MICHELIN CrossClimate+ tires are capable of climbing a snowy slope where the same vehicle fitted with summer tires would inevitably slip.

The new MICHELIN CrossClimate+ not only meets these needs but offers outstanding performance on dry roads and in air temperatures in excess of 7°C, the point where winter tires become increasingly less effective as the thermometer rises, and the detrimental effect as their tread wears.

The new MICHELIN CrossClimate+ bearing the 3PMSF logo can be used all year round, in all weather conditions. They also offer long-lasting performance, and maintain the driver's mobility between the first and the last mile.

With the new MICHELIN CrossClimate+, Michelin is not only making a stand against the planned obsolescence called for by manufacturers who plead in favour of replacing tires at 4 mm of remaining tread depth, but support the long-lasting performance for the customers.

The MICHELIN CrossClimate+ will be launched onto the market during the first quarter of 2017, for 15 to 18-inch wheels. It will replace the current generation of MICHELIN CrossClimate tires.



New MICHELIN PILOT SPORT⁴ S "Genuine Passion – Exceptional Drives"



MICHELIN PILOT SPORT⁴ S is an ultra-high performance tire which replaces the MICHELIN Pilot Super Sport in the range of outstanding tires from the French manufacturer.

Designed for sports cars and high performance saloons, the MICHELIN PILOT SPORT⁴ S offers unparalleled driving pleasure thanks to its exceptional steering precision and directional stability. It provides maximum performance and safety on all surfaces due to its optimized tread footprint which grips the road in all situations, even the most extreme.

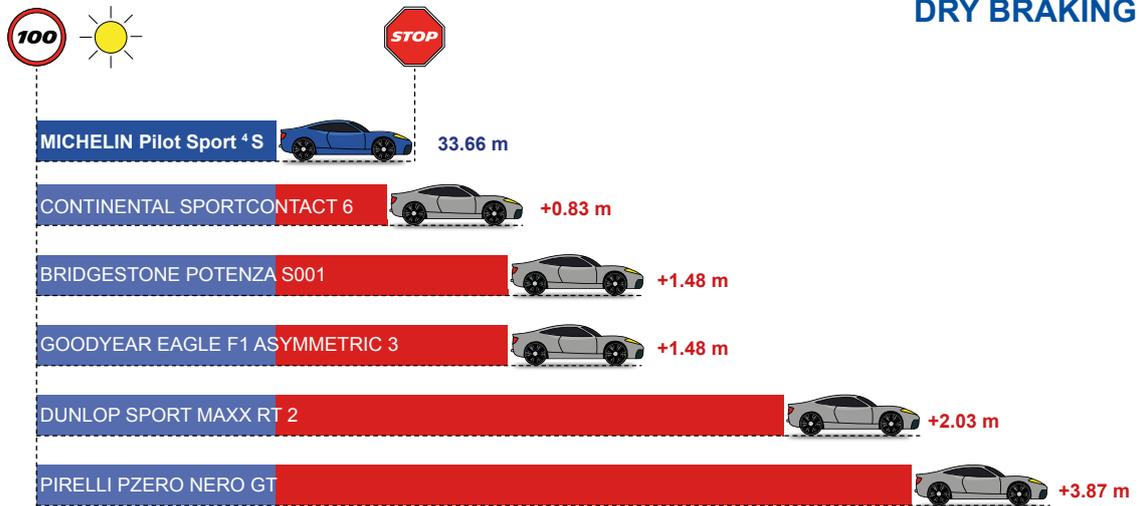
MICHELIN PILOT SPORT⁴ S also displays excellent braking performance on both dry and wet surfaces, thanks to the use of 'bi-compound technology'. The outer part of the tread uses a new hybrid compound that promotes grip on dry ground while the inner part uses a new compound with silica and functional elastomers which allows the tire to offer consistent grip on wet ground. This high performance on dry and wet surfaces, often conflicting characteristics in the world of super sports tires, here have advanced together. They fully express the Michelin Total Performance philosophy, which is to simultaneously advance several performance characteristics on the same tire, whatever the technology challenge.

Leading independent testing

The MICHELIN PILOT SPORT⁴ S is the result of a unique know-how developed by engineers passionate about their work and redefines the standards of the category. Adapted for driving at the highest levels on road and on track, it has already positioned itself as the number one in its class. In tests conducted by the independent organization TÜV SÜD in Germany, the MICHELIN PILOT SPORT⁴ S surpassed its five major competitors in the different workshops, and has become the first ultra-high performance tire to dominate several key testing criteria simultaneously.

Dry braking

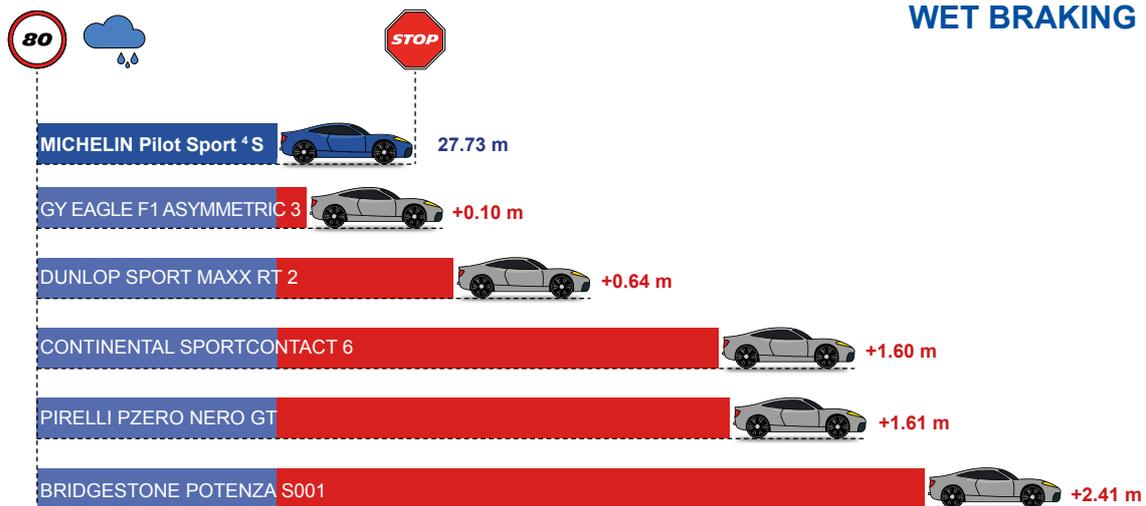
The new MICHELIN PILOT SPORT 4 S takes only 33.66 m to brake from 100 km/h to a complete stop, when the best of its direct competitors takes nearly a meter more (+0.83 m).



External tests realized by TÜV SÜD in June and July 2016 in 255/35-19 96Y XL. BRIDGESTONE Potenza S001, CONTINENTAL SportContact 6, DUNLOP Sport Maxx RT 2, GOODYEAR Eagle F1 Asymmetric 3, and PIRELLI PZero Nero GT bought on European replacement market in 2016 by TÜV SÜD.

Wet braking

On a wet track 27.73 m is enough to brake from 80 km/h to 0. This shows it once again as the best, almost 2.5 m (+2.41 m) shorter than the worst performer.



External tests realized by TÜV SÜD in June and July 2016 in 255/35-19 96Y XL. BRIDGESTONE Potenza S001, CONTINENTAL SportContact 6, DUNLOP Sport Maxx RT 2, GOODYEAR Eagle F1 Asymmetric 3, and PIRELLI PZero Nero GT bought on European replacement market in 2016 by TÜV SÜD.

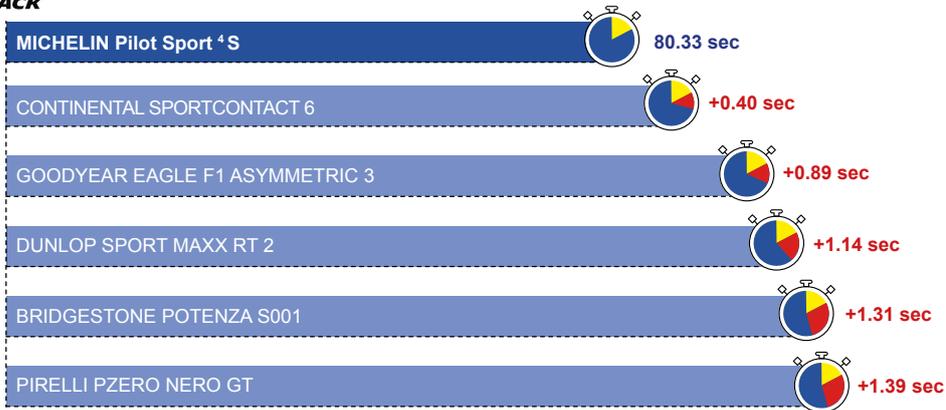


Lap time

On a 2.6 km circuit, the MICHELIN PILOT SPORT 4 S proved to be between 0.4s and 1.39s faster per lap. It's almost a second quicker on average, over this relatively short distance. One second seems insignificant; however the driving experience will be completely different.

2600m
TRACK

LAP TIME

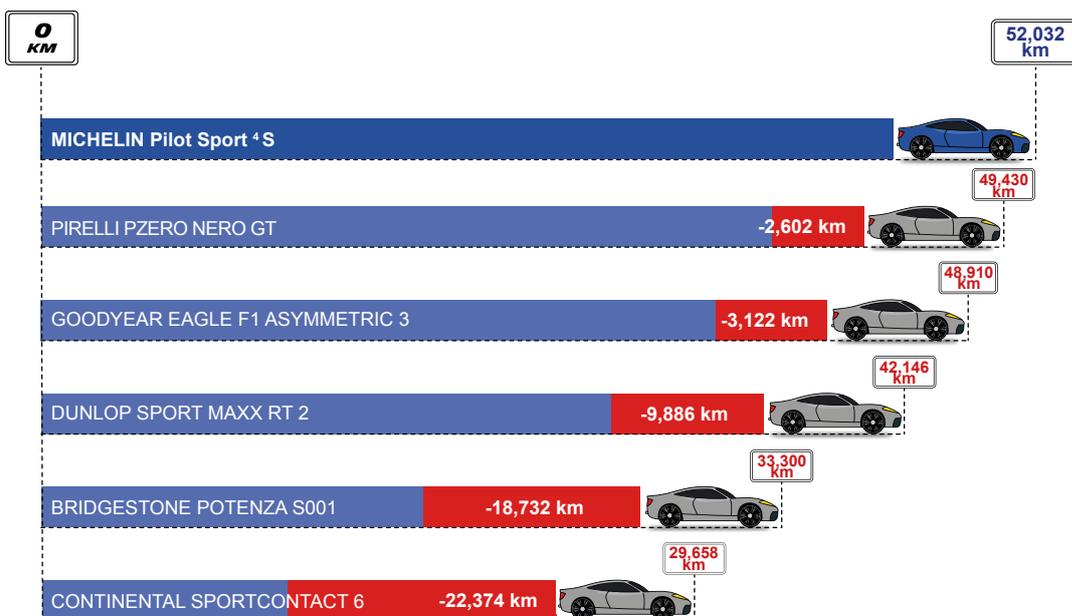


External tests realized by TÜV SÜD in June and July 2016 in 255/35-19 96Y XL. BRIDGESTONE Potenza S001, CONTINENTAL SportContact 6, DUNLOP Sport Maxx RT 2, GOODYEAR Eagle F1 Asymmetric 3, and PIRELLI PZero Nero GT bought on European replacement market in 2016 by TÜV SÜD.

Longevity

Wear tests conducted by the Dekra Test Center demonstrated that the new MICHELIN PILOT SPORT 4 S has the best longevity in its class, and it was the only tire to break the 50,000 km barrier.

LONGEVITY



External tests realized by DEKRA Test Center in June and July 2016 in 255/35-19 96Y XL. BRIDGESTONE Potenza S001, CONTINENTAL SportContact 6, DUNLOP Sport Maxx RT 2, GOODYEAR Eagle F1 Asymmetric 3, and PIRELLI PZero Nero GT bought on European replacement market in 2016 by TÜV SÜD.



The MICHELIN PILOT SPORT⁴ S is also among the first tires in this category to score an A rating on the European labelling scale (19 inch tire) in braking distance on wet surfaces. This label is intended to inform tire buyers of the performance of the tires they are planning to buy and also gives them information on the energy efficiency of the tire and road noise level. The MICHELIN PILOT SPORT⁴ S also passes a new milestone in terms of reducing road noise, while providing good levels of driving comfort.

The passion, on road and track

Michelin is involved in several motor sport disciplines worldwide and uses this competition as a laboratory for development of future tire technologies, which are then used in the development of its production tires. Data collected during racing, mostly from 'confidential' tire technologies or rubber compound recipes, enable Michelin's engineers to validate their findings. The MICHELIN PILOT SPORT⁴ S, which is set to be one of the most successful sports tires ever designed by Michelin for the general public, uses construction methods and materials directly developed in competitions such as the FIA World Endurance Championship (WEC) and its flagship event the 24 Hours of Le Mans, Formula E and the WRC.

Designed to equip the most distinguished sports cars

Michelin is working hand in hand with the world's leading car manufacturers to provide the most suitable tires to complement the performance of their most exclusive models. Thus, the MICHELIN PILOT SPORT⁴ S has been developed to satisfy the owners of cars from manufacturers including BMW M, Ferrari, Ford, Mercedes-AMG and Porsche.

Velvet-like sidewalls and rim protectors



Like all of Michelin's high-end tires the MICHELIN Pilot Sport⁴ S uses Michelin Premium Touch Technology® to enhance the appearance of the sidewall design. This is a sign of the recognition and esteem in which these tires are held in the exclusive automotive world. Moreover, while the vast majority of sports cars are equipped with larger diameter wheels and tires with low profile sidewalls, the MICHELIN PILOT SPORT⁴ S has a practical and aesthetic rim protector that will, in many cases, avoid contact between the rim and the kerb.

The new MICHELIN PILOT SPORT⁴ S will be available from January 2017 in Europe and from early March in the United States. It will be available in 34 sizes, in 19 and 20 inch diameters, covering 92% of the market.



MICHELIN GROUP FACTS & FIGURES

FOUNDED: 1889

INDUSTRIAL FACILITIES: 68 production plants in **17** countries

EMPLOYEES: 111 700

TECHNOLOGY CENTER: over 6,000 people

ANNUAL RESEARCH & DEVELOPMENT BUDGET:

Over **€600** million

ANNUAL PRODUCTION: 184 million tires

NET SALES (2015): €21.199 billion

A LARGE PORTFOLIO OF TIRE BRANDS COVERING ALL MARKET

SEGMENTS: Michelin, BFGoodrich®, Kleber, Uniroyal¹, Warrior, Kormoran, Riken, Taurus, Tigar, Pneu Laurent, Recamic, Michelin remix

4,150 distribution and service centres

¹Except in Europe

Michelin, the leading tire company, is dedicated to enhancing its clients' mobility, sustainably; designing and distributing the most suitable tires, services and solutions for its clients' needs; providing digital services, maps and guides to help enrich trips and travels and make them unique experiences; and developing high-technology materials that serve the mobility industry. Headquartered in Clermont-Ferrand, France, Michelin is present in 170 countries, has 111,700 employees and operates 68 production facilities in 17 countries which together produced 184 million tires in 2015. (www.michelin.com)

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Press kit and photos available from: mediaevent.michelin.com/PRESS/01_GROUPE-CORPORATE/MONDIAL-DE-PARIS-2016

