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MICHELIN Power Pure SC, The World's First Dual Compound Scooter Tire



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1- MICHELIN POWER PURE SC, IN BRIEF

The European scooter tire market has expanded by **73%** in six years¹.

81% of users ride their scooters every day.

78% ride their scooters to work.

33% of scooter drivers are also motor-cyclists.

¹ 1Source: European Tyre and Rubber Manufacturers' Association for tires with P speeding ratings or higher (2011 data)



2- MICHELIN POWER PURE SC, AN INNOVATIVE SCOOTER TIRES THAT DELIVERS ENHANCED MOBILITY

n just six years, the European scooter tire market has expanded by 73%², meaning that in less than a decade, this urban vehicle has become a true social phenomenon.

Much more practical that a car and less restrictive than mass transit, the scooter is playing an increasingly important role in urban and suburban environments. This major mobility trend is accompanied by new needs since scooter users are not only more numerous but also better informed and more demanding. Today's scooter user is looking for safety as much as driving performance. That's why Michelin is now launching the **MICHELIN Power Pure SC**, the world's first scooter tire that integrates dual compound technology.

Never before has a scooter tire been produced with MICHELIN 2CT (Dual Compound Technology), a leading-edge solution developed directly from Michelin's motorcycle racing tires. The process consists of using different rubber compounds for different parts of the tread to produce a tire capable of delivering safety, grip, sportiness and longevity.



3- MICHELIN POWER PURE SC, SAFETY, SPORTINESS AND LONGEVITY IN EVERYDAY USE

ypical riders use their scooters every day (81%), in particular for getting to work (78%).

For them, a tire must above all be safe – especially in city use – and consistently effective regardless of weather conditions. However some users, especially owners of scooters with over 125cc of engine capacity, are also looking for performance. In addition to safety, they want a tire that provides sporty driving sensations. What's more, one scooter user out of three also rides or used to ride a motorcycle. For these demanding consumers, a scooter tire must deliver feedback and grip in all driving conditions without compromising on longevity.

Following the successful launch of the City Grip tire in 2010, Michelin is now introducing an innovative tire that satisfies the emerging needs of scooter users. The MICHELIN Power Pure SC delivers the market's best balance between longevity and grip as well as optimal stability thanks to the use of dual compound technology.

The launch of the Power Pure SC is yet another example of Michelin's strategy of applying innovations developed in racing to street tires. No other tire manufacturer in the world is able to transfer technologies so broadly or quickly.



4- MICHELIN POWER PURE SC: CLOSE-UP ON THE WORLD'S FIRST DUAL COMPOUND SCOOTER TIRE

The MICHELIN Power Pure SC was designed to allow users to get the most out of their scooter's performance, thanks to MICHELIN 2CT. The world's first scooter tire made with dual compound technology, the MICHELIN Power Pure SC provides driving enjoyment, sportiness, grip and longevity. In short, its performance levels make it the first Sport Premium tire in the scooter segment.

Purpose-developed for racing tires, dual compound technology aims to reconcile contradictory technical demands by dividing the tire into different parts (see insert). Each part integrates a type of rubber specially designed to meet specific usage demands. Introduced for motorcycle tires five years ago, this technological advance has since become a benchmark in the segment. It enables the same safety performance as a traditional tire as well as a sporty ride while also meeting user demands for a long-lasting tire.

With the MICHELIN Power Pure SC, the slick central portion of the tread on both the front and rear tires puts more rubber in the area most often in contact with the ground, thereby increasing **longevity**. To maximize tire life, users are also advised to comply with the front and rear tires' specific fitting directions to avoid uneven wear.

The tire's shoulders are made with softer rubber that enhances grip and thus **safety**. As a result, the MICHELIN Power Pure SC holds the road firmly in all road conditions, even on wet, damp or slippery surfaces.



Stress is evenly distributed across the entire tread.



Lastly, the tread design of the MICHELIN Power Pure SC is directly inspired by the "fountain" tread used for racing tires. In this way, the MICHELIN Power Pure SC delivers comfort and **sporty** performance, thus guaranteeing unparalleled driving enjoyment.



MICHELIN Power Rain







A delicate technological achievement, the development of the MICHELIN Power Pure SC was backed by the Group's substantial R&D budget, which allocates nearly €500 million a year to the Technology Center. The tire is also aligned with Michelin's strategic priority of never enhancing performance in one area while sacrificing it in another.

WHAT DOES A DUAL COMPOUND TIRE LOOK LIKE?

The technology involves dividing the tire into different sections. As with Sport Radial tires, the tread of the MICHELIN Power Pure SC is divided into three areas:

- A central area with a hard rubber compound for:
 - Longer tread life, since the hard rubber is positioned where stress is greatest.
 - Greater responsiveness because the tread is more rigid.
- Two areas on the shoulders with a soft rubber compound for:
 - Enhanced grip on both dry and wet surfaces.
 - Safely enabling maximum lean angles, especially when used for sporty driving.





5- MICHELIN POWER PURE SC PROPOSE UNE OFFRE DIMENSIONNELLE IMPORTANTE

110/90	12 64P REINF POWER PURE SC F TL
110/90	13 56P POWER PURE SC F TL
120/70	12 51P POWER PURE SC F TL
120/70	13 53P POWER PURE SC F TL
120/70	14 55P POWER PURE SC F TL
120/70	15 55S POWER PURE SC F TL
120/70	15 56S POWER PURE SC F TL
120/80	14 58S POWER PURE SC F TL
130/60	13 53P POWER PURE SC R TL
130/60	13 60P REINF POWER PURE SC R TL
130/70	12 56P POWER PURE SC R TL
130/70	12 62P REINF POWER PURE SC R TL
130/70	13 63P REINF POWER PURE SC R TL
130/80	15 63P REINF POWER PURE SC R TL
140/60	13 57L POWER PURE SC R TL
140/60	13 57P POWER PURE SC R TL
140/70	12 60P POWER PURE SC R TL
150/70	13 64S POWER PURE SC R TL
150/70	14 66S POWER PURE SC R TL



6- MOTORCYCLE TIRE **INNOVATIONS AND MILESTONES**

Michelin firmly believes that as many people as possible should be able to share its innovations and the numerous benefits they provide in terms of performance, safety and riding enjoyment. Today, many of these Michelin innovations have revolutionized the motorcycle tire segment and are now setting the standard.

1977 - THE SEMI-SLICK TREAD

To meet the needs of increasingly powerful motorcycles, Michelin focused its research on tread design and completely eliminated the tread grooves, which was a revolutionary approach at the time.

Introduced in Grand Prix competition in 1977, the slick tire enabled Suzuki rider Barry Sheene to win the World Championship in the 500-cc class that same year.

- In 2004, the Michelin Pilot Power was introduced with the shallowest grooves of any hypersport street bike tire on the market.

1984 - RADIAL TECHNOLOGY

That year, Michelin's first radial tires were tested in Grand Prix motorcycling racing and very quickly set new performance standards.

- In 1987, Michelin leveraged its experience in competition to introduce the first radial tire for street motorcycles, the MICHELIN A59X / M59X.

Radial technology provides a critical advantage in terms of resistance and stability at high speeds, as well as consistently superior, long-term road performance, riding comfort and wear-resistance.

1992 - SILICA

In early 1990, Michelin introduced racing tires with a 100% silica-reinforced rubber mix. This innovation marked the beginning of a new era of supremacy for Michelin, especially in races run on wet surfaces. By adding silica to the rubber compound used in motorcycle tires, Michelin established a new benchmark for grip on wet tracks.

- In 1999, the MICHELIN Pilot Sport became the first road tire to benefit from this innovation.

1994 - THE FIRST DUAL COMPOUND TIRE TESTED IN THE GP 500 CLASS

Dual compound technology enabled Michelin to widen its technological lead over the competition and continue its domination in premier-class motorcycle racing. - In 2005, for the first time, a hypersport tire was produced with different rubber compounds in the center and on the shoulders. Called the MICHELIN Power Race, it was the first racing tire approved for road use to integrate this dual compound.

- In 2006, Michelin went even further in applying its dual compound technology. Integrating technologies developed through track racing, the Michelin Pilot Power 2CT was intended for sports motorcycles used mainly on the road.

2009 - ASYMMETRIC TECHNOLOGY

This technology was introduced in 1994 in Moto GP500 racing. Combining asymmetric technology (AST) with three compound technology (3CT) made it possible to use different rubber compounds on the right and left sides of the tire, as well as a third, more resistant compound for the center of the tread. In this way, the shoulder that is more often in contact with the ground during a race will use a harder rubber so that its lifespan is aligned with the total distance to be covered.

- In 2009, thanks to AST technology, the 16.5-inch Michelin Power One was the first tire in this category to adjust to the special features of each track, taking into account the different demands put on each side of the tire, depending on whether the circuit has more left or right turns.

2011 - MICHELIN XST (X-SIPE TECHNOLOGY)

MICHELIN XST (X-Sipe Technology) features a revolutionary tread. Combining sipes and wells, the tread breaks the film of water on the road, increases drainage capacity and delivers the conditions of grip found on roads that are practically dry. The MICHELIN Pilot Road 3 was the first motorcycle tire to integrate this technology.



7- MICHELIN GROUP: MILESTONES

For more than a century, Michelin has dedicated its expertise and innovation to enhancing the mobility of people and goods around the world.

- **1889:** Founding of **Michelin et Cie**.
- **1891:** Michelin files its first patents for removable and repairable tires.
- **1895:** Michelin introduces Éclair, the first car to be fitted with pneumatic tires.
- 1898: "Birth" of Bibendum, the Michelin Man.
- 1900: First MICHELIN guide published.
- **1905:** Introduction of the **Michelin Sole** tread with hobnails to improve tire grip and durability.
- **1910:** First 1/200,000 scale Michelin **road map** published.
- **1913:** Michelin invents the **removable steel wheel**.
- **1923:** First **low-pressure car tire** (2.5 bar).
- **1926:** Michelin creates its first **Green Guide for tourists**.
- **1930:** Michelin files a patent for the **integrated tube tire**.
- 1938: Michelin launches Metalic, the first truck tire with a steel casing.
- **1946:** Michelin invents the **radial tire**.
- **1959:** Michelin introduces the first radial tire for earthmovers.
- **1979:** The Michelin radial tire wins the Formula 1 championship.
- 1981: The MICHELIN X Air is the first radial aircraft tire.
- **1989:** Michelin launches the first online travel itinerary service, on France's Minitel teletext network.
- **1992:** Launch of the fuel-efficient **MICHELIN ENERGY™** tire.
- **1993:** Michelin invents the new C3M tire manufacturing process.
- **1995:** The US space shuttle lands on Michelin tires.
- **1996:** Michelin invents the vertically anchored PAX System tire.
- **1998:** The first **Michelin Challenge Bibendum**, the world's leading clean vehicle event.
- 1998: The Michelin Man's 100th birthday.
- **2000:** Michelin Man voted best logo of all time by an international jury.



- 2001: Michelin brings to market the world's largest earthmover tire.
- **2003:** Launch of Michelin brand automotive accessories.
- 2004: New corporate signature introduced: "Michelin, a better way forward."
- **2004:** Launch of the MICHELIN XeoBib, the first agriculture tire that operates at constant low pressure.

2005: Michelin provides tires for the new Airbus A-380 aircraft - Launch of the **MICHELIN Power Race**, the first dual compound racing tire approved for road use.

- 2006: Michelin revolutionizes truck tires with MICHELIN Durable Technologies.
- **2007:** Launch of the new **MICHELIN ENERGY™ Saver** tire, which reduces fuel consumption by nearly 0.2 liters per 100 kilometers, thereby lowering carbon emissions by 4 grams per kilometer.
- 2008: Introduction of the new MICHELIN X ENERGY™ SAVERGREEN truck tire.
- **2009:** 100th edition of the **MICHELIN guide France**.
- 2010: Market launch of the MICHELIN Pilot Sport 3 and MICHELIN Pilot Super Sport tires.
- **2011:** Presentation of the new MICHELIN **Primacy 3**.

QUELQUES CHIFFRES CLÉS SUR LE GROUPE MICHELIN

Founded:	1889
Production base:	70 plants in 18 countries
Number of employees:	111,000 worldwide
Technology Center:	More than 6,000 researchers on three continents: North America, Europe and Asia
Annual R&D budget:	Over €00 million
Annual output:	More than 175 million tires produced, over 10 million maps and guides sold in more than 170 countries, and 875 million itineraries calculated by ViaMichelin
2010 net sales:	€17.9 billion

An extensive portfolio of brands covering all market segments: Michelin, BFGoodrich, Kleber, Uniroyal, Riken, Taurus, Kormoran, Warrior, Pneu Laurent, Recamic, MICHELIN Remix, TCI Tire Centers, Euromaster and TyrePlus.

