



## THE SPANISH GRAND PRIX FROM A TYRE POINT OF VIEW

*Barcelona (Spain), May 19<sup>th</sup> 2011* – New for the Spanish Grand Prix is the latest evolution of the Pirelli PZero Silver tyre, the hardest compound in Pirelli's range.

The new PZero Silver has the same basic structure and construction as its predecessor but uses a new compound that reduces degradation and increases the range by 10 to 25%, depending on a variety of factors such as track surface, weather conditions, set-up and driving style. The PZero Silver is designed to represent a bigger step over the PZero Yellow (soft) tyre, which will also be used in Barcelona this weekend. This combination gives teams greater scope to make use of more creative race strategies.

### THE TRACK

The most critical part of the 4.655-kilometre Montmelo track is Turn Three: a long right-hander that is notorious for working both the front and rear left-hand tyres extremely hard. The combined power of KERS and an 830-horsepower engine provide a huge load for the tyres to process, as they negotiate the corner with a lateral force of 3.9G.

In the middle part of the circuit the drivers reach speeds in excess of 280kph in sixth gear before standing hard on the brakes in preparation for another well-known corner: Campsa.

The drivers use the kerbs to get round this corner, putting vertical loads of 800 kilograms through the tyre. Exiting the turn over the kerbing produces intense vibrations that are absorbed by the tyre carcass. This filters and reduces what is ultimately transferred to the Formula One car: underlining the tyre's crucial role as part of each car's suspension.

Under braking for La Caixa, the PZero is subjected to a longitudinal deceleration of 4.85G. A lateral force of 1.8G then pushes the car to the outside of the corner, working the front-right tyre until the very last metre of the corner.

By contrast, the final chicane is the slowest part of the circuit. With very little

downforce, the tyres are the sole source of mechanical grip. In order to achieve the best traction the tyres must then manage the full power of the engine as the cars accelerate back up to 300kph in seventh gear on the start-finish straight: the quickest part of the circuit.

## **FORMULA ONE AND ROAD CAR TYRES**

The 50,000 Formula One tyres that will be produced this year are just a small fraction of the millions of tyres that Pirelli makes over the course of a year. One of the latest models at the other end of the scale to the Formula One PZero is the Pirelli P1, which is designed for small to medium sized vehicles with an emphasis on green technology.

The P1 is designed to last between 50,000-60,000 kilometres – around 600 times longer than the Formula One tyre – and offers a 30% reduction in road noise over its predecessor as well as a 25% improvement in rolling resistance. Like every single one of Pirelli's tyres, the PZero Silver is built to perform a specific task.

Pirelli is the acknowledged world leader in Ultra High Performance road car tyres, which is underlined by the company's involvement in Formula One. The PZero name, used in Formula One, actually comes from Pirelli's range of high performance road car tyres. The PZero Corsa System is essentially a track tyre for sports cars, while the PZero is Pirelli's latest and most prestigious tyre for high-powered vehicles.

The PZero Rosso ensures the optimum balance between comfort and performance while the PZero Nero is suited to a wide range of tuned and performance cars.

## **PIRELLI'S MOTORSPORT DIRECTOR SAYS**

Paul Hembery: "Our new PZero Silver tyre is an evolution of the existing tyre that should provide an extra five laps or so of running compared to the previous version, widening the gap between the new hard tyre and the soft. This will become the definitive hard tyre for the year, providing we see the results that we are expecting from the race. These are tyres that have been extensively tested, so I feel confident that they will add another exciting dimension to the race this weekend – particularly in terms of potential strategies."

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**For further information please contact:**

Alexandra Schieren      +33 607 03 69 03      [alexandra.schieren@pirelli.com](mailto:alexandra.schieren@pirelli.com)

Anthony Peacock      +44 7765 896 930      [anthony@mediatica.co.uk](mailto:anthony@mediatica.co.uk)

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Francescopaolo Tarallo      +39 334 684 4307

[francescopaolo.tarallo@pirelli.com](mailto:francescopaolo.tarallo@pirelli.com)

(Head of Product and Motorsport Communications)

Pirelli Tyre Press Office  
Ph. +39 02 6442 4270 – [pressoffice@pirelli.com](mailto:pressoffice@pirelli.com) – [www.pirelli.com](http://www.pirelli.com)

