

DIABLO™ ROSSO CORSA

DETAILS



PROPERTY

Positioning of grooves optimized for use on road and racetrack

EFFECT

Slick performance with high control on wet surfaces
Greater precision and road holding on bends with possibility of earlier acceleration coming out of them



PROPERTY

Rear with 3 compound zones

EFFECT

Exceptionally high on every road surface situation

Competition performance on track, excellent balance between performance and duration on the road



PROPERTY

Optimization of the area of contact

EFFECT

Road holding and grip
More power dischargeable to the
ground

DIABLO™ ROSSO CORSA

TECHNICAL ADVICES

ROLE AND POSITIONING

STRUCTURE AND PROFILE

TREAD PATTERN

COMPOUND

BENEFITS

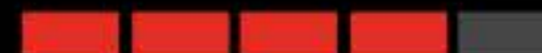
MORE POWER TO THE GROUND

Pirelli's continuous development of radial competition tires in WSBK, the know how acquired through an extensive experience in high performance segments and the cooperation with world class bike manufacturers, have made it possible for Pirelli to improve the performances of the well established Diablo Corsa III.

This development has been focused and adapted to the latest generation of machinery, characterized by important technological features and electronic aids such as: ABS braking now available on a wide variety of liter bikes, dynamic traction control systems from Ducati and BMW, advanced electronic management systems, multi-setting suspensions, and racing-oriented slipper clutches.



HANDLING



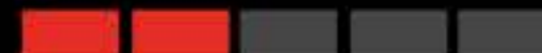
MILEAGE



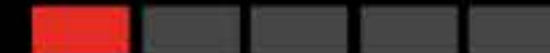
DRY GRIP



WET BEHAVIOUR



TRACK USE



ROLE AND POSITIONING

STRUCTURE AND PROFILE

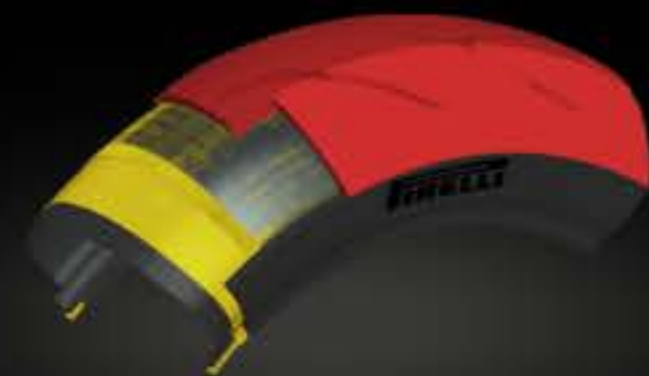
TREAD PATTERN

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DIABLO ROSSO™ Corsa tire profiles are derived from WSBK racing experience, specifically engineered to deliver the optimal distribution of forces in the contact patch area. The footprint area is therefore enlarged and all available horsepower can be transmitted to the ground. Utilizing ICS (Ideal Contour Shaping) technology, an integration of the handcrafted care of Pirelli engineers with the support of sophisticated computer modeling systems, DIABLO ROSSO™ Corsa profiles full support while leaning and great confidence in cornering exits at full throttle.



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DIABLO ROSSO™ Corsa tread design is the adaptation of the innovative concepts arriving from the supersport reference tire, the Diablo Rosso. The result is a stunning tire with a captivating design and a 7% land/sea ratio, which means more rubber on the ground.

DIABLO ROSSO™ Corsa tread design is characterized by:

- patented concept of differentiating longitudinal grooves from side grooves in order to reduce total land/sea ratio without sacrificing water shedding capability;
- tread groove wall angle (patented) ensures an equal water flow throughout the tire's life.

As the tire wears the less severe incline angle of the groove walls maintains consistent performance by avoiding tread edge deformation, along with a variable groove width for constant water dispersal until the last kilometer.

Both front and rear patterns are designed with FGD (Functional groove design) technology offering racetrack performance (closer to a racing Slick) and greater control on wet surfaces.

In wet conditions, the front tire disperses the water by cutting through and allowing the rear tire to provide adequate grip. On the rear tire, grooves are located exactly where needed for an optimal balance between drainage and warm-up time:

- 100% slick-like area at maximum lean to allow WSBK level grip;
- transversal grooves between the rear tire's central and shoulder sections to quickly disperse residual water, ensuring maximum grip throughout wet corners;
- central rib guarantees more rubber on the ground for traction and straight line stability.

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Among the new solutions developed for DIABLO ROSSO™ Corsa, compounds play a primary role.

FRONT

Based on latest feedback from WSBK Riders, the front tire compound guarantees maximum support under heavy braking and corner exit.

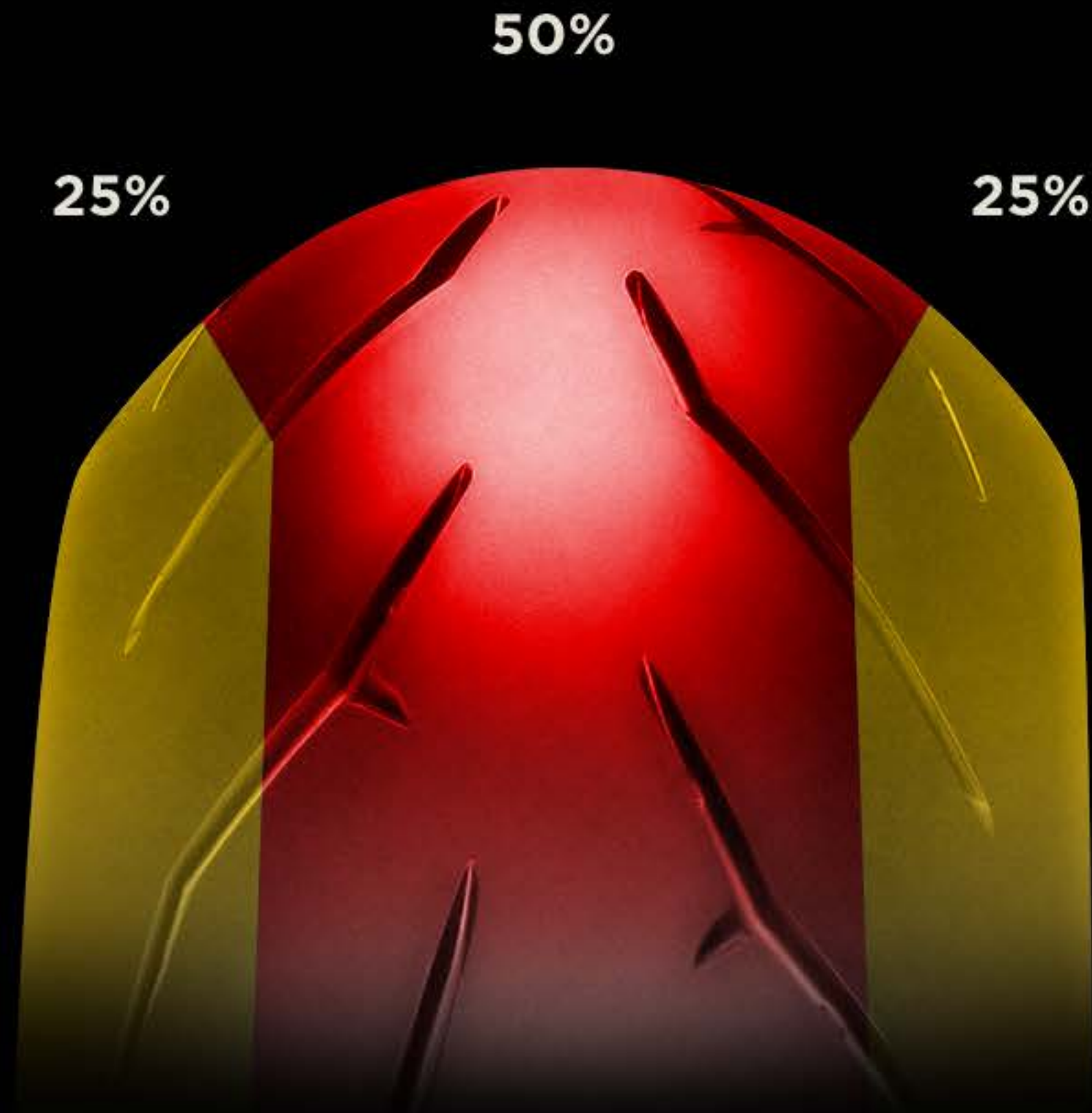
This concept of 'high grip with high stiffness' was maintained by combining compounding tools (dedicated reinforced carbon black and resins) which increase tread life and wet safety. The result of this development is a compound with both a racing and street soul.

REAR

III zone compound on rear represents the ideal way to offer the best performance where required in very different conditions (racetrack and road).

The differentiated compounds between shoulders and center zone are the winning solutions engineered to give to DIABLO ROSSO™ Corsa racing performance on racetrack and long lasting durability on road.

- Strong mileage is guaranteed by materials with high mechanical resistance in the central zone, while the high hysteresis shoulder compound gives steady grip response and incredible traction even at high lean angle.
- In the central zone the compound is derived from Diablo Rosso experience, but even sportier; Pirelli engineers have inserted special resins and plasticisers optimized in terms of chemical properties and quantity to ensure the best balance between dry and wet grip. Furthermore the compound mixture is cured with a dedicated process to increase wear resistance, thus mileage.
- The wide shoulders adopt a new softer compound developed and used in the WSBK arena. The 100% Carbon black compound is less rigid especially at mid-low temperature allowing for a very quick warm up, and reducing the difference in temperature versus crown area for a very linear transition from one compound to the other. DIABLO ROSSO™ Corsa shoulder compound adopts the same WSBK resins as the Supercorsa specifically tuned for very high temperature and high levels of stress, which are typical requirements of the racetrack.



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Road Grip

Thanks to the latest generation Supersport compound, DIABLO ROSSO™ Corsa delivers grip in a wide range of temperatures and applications under typical street-riding conditions.

Racetrack Grip

Thanks to the WSBK driven compound on the shoulders, grip is also guaranteed in severe track-riding conditions at high lean angles for impressive power transmission to the ground.

Street Handling

The adoption of Ideal Contour Shaping (ICS) technology guarantees a quick and reactive ride, a reassuring contact feeling and precision cornering.

Racetrack Handling

DIABLO ROSSO™ Corsa ensures high capability to bear all stresses with maximum confidence even in quick direction change.

Economy on road

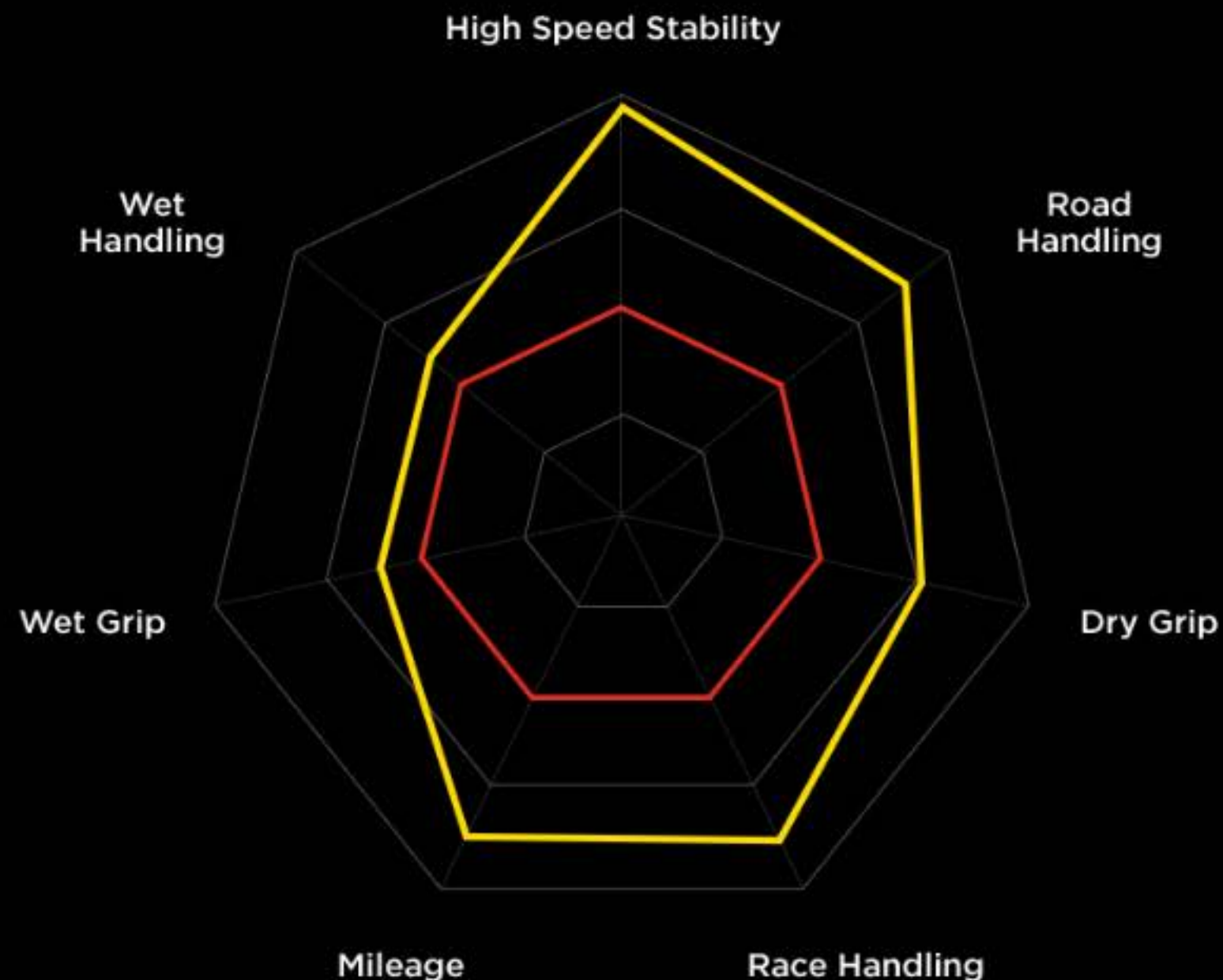
New reinforcement chemicals and a new curing system allow DIABLO ROSSO™ Corsa to preserve performance characteristics (drainage, stability and grip) throughout lifetime.

On Track Consistency

By adopting Enhanced Patch Technology (EPT), DIABLO ROSSO™ Corsa ensures quick warm-up and a consistent hi-performance level lap after lap together with excellent performance recovery after stop&go.

Wet behavior

Thanks to Functional Groove Design (FGD), DIABLO ROSSO™ Corsa provides best-in-class wet performance for "peace of mind" riding in critical conditions.



DIABLO ROSSO III

DIABLO ROSSO CORSA

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Motorcycle fans already know that the engine's power is never the same as the power actually used by the motorcycle, due to various other elements that dissipate energy, like the transmission. It's for this reason, and to provide a true indication of the bike's performance, that the power available to the wheels is always measured.

Between the power available to the wheel and the power actually delivered to the ground, the important role of the tire must be considered. In particular, it's important to consider the tire's ability to transfer power and to avoid slipping and sliding.

DIABLO ROSSO™ Corsa offers a new way to measure tire performance: evaluating the ability to transfer the bike's power to the ground and expressing this as horsepower available on the ground.

In fact, Pirelli's new motorcycle tire is the first to have undergone severe tests to measure the actual power discharged on the ground by the bike as it comes out of a turn.

The tests were carried out using one of the most popular super sports bikes in the world, the Honda CBR 1000RR. The bike was tested in its standard configuration, with normal factory suspension and set-up, and with the tires inflated to street use pressure, as recommended by the Japanese manufacturer. Tire measurements were those recommended by the manufacturer: Front tire 120/70 ZR17 M/C (58W) TL; Rear tire 190/50 ZR17 M/C (73W) TL.

Pirelli tested the performance of the new DIABLO ROSSO™ Corsa on its experimental test course in Syracuse, which is normally used to develop high performance radial tires.

With the track's very fast, long curves, the bike's response as it exits turns can be evaluated at the precise moment of acceleration when increased power is transferred to the wheels.

The tests compared DIABLO ROSSO™ Corsa with several other tires in the same category: Diablo Corsa III, Diablo Rosso, Dunlop Qualifier RR, Michelin Power Pure, Bridgestone BT 016 and Metzeler Sportec M5.

Thanks to the use of data acquisition equipment normally used for Superbike applications, Pirelli was able to measure the necessary parameters accurately to calculate the power transferred to the ground by the bike and hence by the tires.

Starting from a pure scientific standpoint, these parameters included: acceleration (both lateral and longitudinal), vehicle weight, instantaneous speed, and curve angle.

Measurements focused on the moment the bike exited the peak of the turn, when the throttle was opened. In other words, the exact moment when the driver needed the maximum power available on the ground in order to obtain maximum acceleration. In this way, Pirelli's Research & Development staff were able to measure the power in horsepower (HP) that the bike was able to discharge on the ground, instant by instant, centimetre by centimetre, throughout the various turns on the Sicilian track.

The results showed that, coming out of the turn, at the moment the bike is at maximum acceleration, DIABLO ROSSO™ Corsa is able to transfer at least an additional 10 HP to the ground in comparison to the other tires tested.

The increased power transferred from the bike to the ground thanks to the new DIABLO ROSSO™ Corsa means faster acceleration coming out of turns, higher speeds in straight areas, and above all, faster lap times.

The new DIABLO ROSSO™ Corsa is able to offer this type of performance thanks to its innovative features including the three different compound areas on the rear area that make it possible to use WSBK solutions on the shoulder which offer excellent grip, and the Enhanced Patch Technology that increases the area of contact between the tire and the road, making it easier to discharge the bike's power to the ground.

Shop for quality Pirelli products on our website.

Learn more about motorcycle tires we have.