

**PRESS KIT**

January 2015

# MICHELIN

2015 Rallye Monte-Carlo



## **CONTENTS**

### **Michelin and the 2015 Rallye Monte-Carlo – PRESS KIT**

#### **The Rallye Monte-Carlo: where tyres matter**

- › Unpredictable conditions
- › Accurate tyre calls make a real difference
- › Pre-event testing to prepare for the Rallye Monte-Carlo
- › The key role played by Michelin's Technical Team Advisors

#### **Michelin tyres for the 2015 Rallye Monte-Carlo**

- › For dry and wet asphalt: three versions of the MICHELIN Pilot Sport
- › Snow: the MICHELIN Pilot Alpin PA4, technologies for motorsport and road use
- › Ice: the MICHELIN Pilot Alpin PA4, to bite into the ice
- › Tyre quantities for the 2015 Rallye Monte-Carlo

#### **The fiercely competitive WRC2 class**

#### **A taste of Rallye Monte-Carlo action for Michelin's VIP guests**

- › Michelin's guests in Monte-Carlo: actor François Cluzet and athlete Renaud Lavillenie

#### **Michelin and the Rallye Monte-Carlo: a history of people and victories**

## The Rallye Monte-Carlo: where tyres matter

The Rallye Monte-Carlo, opening round of the 2015 FIA World Rally Championship (WRC), is an event where tyres tend to make their biggest contribution. Although performance is always the combination of three factors (driver, car and tyres), tyres play an especially predominant role on the Monte.

### **Unpredictable conditions**

The conditions encountered in the course of the Rallye Monte-Carlo are varied at best, but they are also frequently unpredictable, with surfaces ranging from dry and wet asphalt, to dirt, snow or ice in differing proportions, resulting in constantly changing levels of grip on a single stage.

Victory calls for an intuitive understanding of this ever-shifting cocktail and experience of the stages, plus an understanding of when to adjust one's pace and driving style to the realities of the moment.

For the teams, finding the ideal set-up is like having to repeatedly solve the Rubik cube and tyre choices are always a complex business which necessitates referring to the results of pre-event testing, using special calculation software and taking on board the recommendations of Michelin's Technical Team Advisors.

### **Accurate tyre calls make a real difference**

The performance difference between two tyre types of opposing extremes can amount to 30 seconds per kilometre on snow (especially on downhill sections, where the car's weight and speed is compounded by gravity), that is to say between dry weather tyres and the MICHELIN Pilot Alpin PA4 which would be the ideal fitment in this case.

Such big differences aren't just theoretical. Situations where, for example, conditions switch from dry asphalt to snow and back are not uncommon in the mountains visited by the Rallye Monte-Carlo.

Even apparently clear roads can be treacherous. For cold surfaces, the soft-compound MICHELIN Pilot Sport S4 is the most competitive choice but drivers mustn't forget that frost can form in shade, in which case the 'super-soft' SS4 version is the recommended option. Indeed, although these two variants feature the same construction, the rubber compound used for the tread can lead to a difference of between five and seven seconds per kilometre.

Another frequent brainteaser is a stage which begins with snow and ends with 'clear' asphalt. Drivers might be tempted to opt for the MICHELIN Pilot Alpin PA4 snow tyre in order to be able to push on the snowy portion. However, snow tyres aren't the ideal choice for dry roads and running the soft-compound MICHELIN Pilot Sport S4 can represent a gain of between 3.5 and five seconds per kilometre. This difference tends to increase as the stage progresses, too, since the MICHELIN Pilot Alpin PA4's extensively siped pattern tends to wear more quickly when not used on snow.

The surface type, lie of the land (proportion of uphill and downhill sections) and profile of the stages all have a significant influence on tyre choices.

## **Pre-event testing to prepare for the Rallye Monte-Carlo**

How do the teams gather the information they need to be able to select the ideal tyre for a given set of conditions?

To begin with, experience counts for a great deal, and this comes from years of contesting the Rallye Monte-Carlo. Knowing which solutions were the most effective in the past, and also those which failed to give satisfactory results in similar situations, is certainly a big aid in the decision-making process.

The cars evolve, however, the drivers move on and Michelin's tyres have improved consistently, so experience alone would be insufficient without a rigorous analysis of the results of bespoke pre-event testing,.

The teams do not hesitate to invest in several such sessions which generally take place between the end of December and the beginning of January on roads comparable with those visited by the Rallye Monte-Carlo.

Michelin's partners use these tests to harvest the necessary data to feed into their software which will ultimately help them to make their tyre choices. To assist them in this complex process, each partner team benefits from the input of their Michelin Technical Team Advisor.

## **The key role played by Michelin's Technical Team Advisors**

The expertise of Michelin's Technical Team Advisors is fundamental throughout the season, especially when teams face complicated tyre choices due to varied and/or unexpected conditions. Their role is especially critical on the Rallye Monte-Carlo which throws up its own set of specific challenges.

Their central role begins during pre-event testing when they pool their expertise with that of the engineers of Michelin's partner teams to analyse the performance characteristics of each Michelin option across the full spectrum of possible conditions.

Given that testing on the actual stages visited by the rally is not permitted, it is first necessary to locate alternative venues with similar profiles and surfaces. Once a suitable section of road has been found, permission from the local authorities must be sought in order to close it to other traffic for one or more days.

The different Michelin solutions are evaluated in turn along the same stretch of road and with the same car set-up in order to be able to isolate and calculate the influence of the tyres on the drivers' times. The results are fed into a simulation programme which serves as a valuable tool on the event itself. Michelin's Technical Team Advisors also have records from previous years, although this information is for Michelin's use only. Back at their office at Michelin Motorsport's headquarters in Clermont-Ferrand, they gather to pool their findings and calculations which remain confidential.

This fundamental data is also passed on to Michelin Motorsport's Technical Department with a view to developing more competitive solutions in the future.

## Michelin tyres for the 2015 Rallye Monte-Carlo

The Rallye Monte-Carlo has its own specific challenges, which is why the regulations for the FIA World Rally Championship are adjusted for this event. For most rounds, only one type of tyre is permitted, in a choice of 'soft' and 'hard' compounds, but drivers benefit from a more extensive range for the Rallye Monte-Carlo.

### **For dry and wet asphalt: three versions of the MICHELIN Pilot Sport**

The new MICHELIN Pilot Sport was introduced at the 2014 Rallye de France-Alsace and marks a ground-breaking technological step forward compared with its predecessor. Indeed, the WRC regulations require that asphalt tyres must cover both dry and wet conditions. Although its previous solution was competitive, Michelin decided to take the notion of versatility dictated by the regulations a degree further with the S4 and H4 versions of the Pilot Sport which were launched last October. They feature a more open tread pattern which is not dissimilar to that of the MICHELIN Pilot Sport EV the firm has developed in parallel for the FIA Formula E all-electric single-seater racing championship which requires a single type of tyre for wet and dry conditions. Michelin's latest WRC tyre represents a performance gain on wet asphalt of up to 0.6s/km with no corresponding fall-off in stage times in dry conditions.

For the Rallye Monte-Carlo, Michelin has produced an even softer-compound version, namely the MICHELIN Pilot Sport SS4 (SS = super soft).

There are consequently three 'clear asphalt' tyres for the 2015 Rallye Monte-Carlo:

- The hard-compound **MICHELIN Pilot Sport H4** for dry conditions with ground temperatures of more than 10°C.
- The soft-compound **MICHELIN Pilot Sport S4** for dry conditions with ground temperatures of less than 10°C, or for wet conditions.
- The 'super-soft'-compound **MICHELIN Pilot Sport SS4** for temperatures close to or below 0°C, or frost.

Size: 235/40R18 (equivalent to 20/65-18).

### **Snow: the MICHELIN Pilot Alpin PA4, technologies for motorsport and road use**

The MICHELIN Pilot Alpin PA4 is an eloquent example of how technology is carried over from motorsport to road tyres. This tyre was developed at the same time as its road-going counterpart by development experts working out of Michelin Motorsport and their colleagues at Michelin's Technology Centre in Ladoux, near Clermont-Ferrand, France.

The construction of the WRC version is stronger than that of the road tyre in order to withstand the greater constraints that are part and parcel of rallying, but there are real similarities between the tread patterns of the two products and the materials they employ.

Thanks to this experience, motorists are able to benefit from a high-performance winter tyre for dry and wet conditions which is also particularly efficient on snow.

Size: 215/45R18 (equivalent to 18/65-18).

### **Ice: the MICHELIN Pilot Alpin PA4, to bite into the ice**

It is also possible to equip the MICHELIN Pilot Alpin PA4 with metal studs for use on icy stages. These studs have to comply with the FIA WRC regulations which notably seek to protect snow-free road surfaces. Each tyre is fitted with approximately 200 studs (10 studs every 10cm around the circumference), although only the outer part of the tread may be studded. The maximum stud length is 15mm, of which 13mm must be inserted inside the rubber tread block. Each stud weighs less than two grams. A new Michelin-developed post-production studding process was recently introduced enabling the studs to be anchored within the mass of the tyre thanks to a special bonding agent.

### **Tyre quantities for the 2015 Rallye Monte-Carlo**

The number of tyres available to each driver is restricted at every round of the world championship. The number of tyres they can actually use is also limited.

For the 2015 Rallye Monte-Carlo, the allocation available to each WRC1 driver is **82 tyres**:

- 8 x MICHELIN Pilot Sport H4s
- 16 x MICHELIN Pilot Sport S4s
- 24 x MICHELIN Pilot Sport SS4s
- 10 x MICHELIN Pilot Alpin PA4s
- 24 x MICHELIN Pilot Alpin PA4 CLs (studded)

Drivers may use up to **34 of the above tyres in the course of the rally**.

This information is provided in the specific regulations published by the ACM (Automobile Club de Monaco), organiser of the Rallye Monte-Carlo.

## **The fiercely competitive WRC2 class**

Michelin has always campaigned in favour of open competition between tyre brands and this is no more apparent than in the WRC2 class. Since 2014, the category has pitted four manufacturers against each other and last year's title was won by the Qatari Michelin runner Nasser Al-Attiyah after a fiercely fought season.

On the 2015 Rallye Monte-Carlo, Michelin's WRC2 partners will compete on tyres that are available for general sale through a network of officially-approved suppliers.

In dry and wet conditions, they will be able to count on the versatility of the H (hard compound), S (soft) and SS (super soft) versions of the MICHELIN Pilot Sport R (235/40R18, equivalent to 20/65-18, and the same size as the tyres used by the WRC cars).

For snow, the French firm will provide its partners with the MICHELIN NA00 which is available with or without studs. As is the case for the World Rally Cars, this tyre is narrower (215/45R18, equivalent to 18/65-18) than the 'clear asphalt' tyre.

Each WRC2 driver has a total allocation of **74 tyres** for the 2015 Rallye Monte-Carlo:

- 8 x MICHELIN Pilot Sport R Hs
- 16 x MICHELIN Pilot Sport R Ss
- 16 x MICHELIN Pilot Sport R SSs
- 10 x MICHELIN NA00s
- 24 x MICHELIN NA00 CLs (studded)

Drivers may use up to **34 of the above tyres in the course of the rally.**

Michelin's chief partners in the WRC2 class on the 2015 Rallye Monte-Carlo are Stéphane Lefebvre/Stéphane Prévot (Citroën DS3 R5), Craig Breen/Scott Martin (Peugeot 208 T16), Quentin Giordano/Valentin Serraud (Citroën DS3 R5), Jonathan Hirschi/Vincent Landais (Peugeot 208 T16) and Eric Camilli/Benjamin Veillas (Ford Fiesta R5). They will be able to count on the qualities of their tyres in their respective bids to beat their opponents competing on rival products.

This year, the competition will also be fiercer in the premier class, too. After a season with Michelin, Robert Kubica has decided to join Martin Prokop, Lorenzo Bertelli and Yurii Protasov on the tyres of an alternative brand, providing Michelin with a further opportunity to benchmark its products alongside those of battle-hardened rivals.

Meanwhile, the RGT class will feature a higher number of competitors with François Delecour, Romain Dumas and Marc Duez all entered in Michelin-equipped Porsche 911s. The bespoke championship for this class features two WRC rounds and three rounds of the ERC in 2015.

### **A taste of Rallye Monte-Carlo action for Michelin's VIP guests**

The organisers of the 83<sup>rd</sup> Rallye Monte-Carlo have concocted a route that is 75% new. One of the chief changes is the official start location which reverts to Monte-Carlo's Place du Casino late Thursday afternoon (January 22). The ACM has made the most of this opportunity to organise a road show through the streets of the Principality earlier the same day. From 2:30pm to 5pm, VIP guests will get a unique chance to experience the thrill of sitting in the co-driver's seat over a 2.5-kilometre section of the famous Formula 1 circuit (tunnel, swimming pool, Rascasse, start/finish line).

#### **Michelin's guests in Monte Carlo: actor François Cluzet and athlete Renaud Lavillenie**

Michelin has consequently invited two world-renowned guests to take part in this special event, namely the multiple award-winning French actor François Cluzet and the pole-vaulting world record holder Renault Lavillenie. These two stars snapped up the chance offered to them by Michelin to sit alongside Sébastien Ogier (Renaud Lavillenie) and Sébastien Loeb (François Cluzet).

French actor **François Cluzet** was born on September 21, 1955, in Paris, France. His acting career started in theatre in 1976, followed by his film debut in 1979 (*Cocktail Molotov*, by Diane Kurys). A year later, he appeared in *Cheval d'Orgueil* directed by Claude Chabrol with whom he also worked on *Les Fantômes du Chapelier* in 1982. In 1983, he played in *L'Été Meurtrier* (Jean Becker) which earned him a nomination the following year for France's César awards as Best Support Actor. The same year, he was also in the running For Best Young Male Actor for his role in *Vive la Sociale*.

As his reputation grew, François Cluzet worked with more and more of France's leading directors, with a penchant for dramatic roles: *Coup de Foudre* (Diane Kurys, 1983), *Autour de Minuit* (Bertrand Tavernier, 1985), *Rue du Départ* (Tony Gatlif, 1985), *Chocolat* (Claire Denis, 1988), *Force Majeure* (Pierre Jolivet, 1988, César nomination for Best Support Male Actor), *Une Affaire de Femmes* (Claude Chabrol, 1988), *Trop Belle pour Toi* (Bertrand Blier, 1989) and *La Révolution Française* (Robert Enrico). He worked again with Chabrol as a jealous husband in *L'Enfer* (1994).

In 1995, he appeared in *Les Apprentis* (César nomination for Best Actor) and *Enfants de Salaud* (Tonie Marshall) followed by another Chabrol film (*Rien Ne Va Plus*, 1997).

His has frequently played the role of a tormented writer, as in *Fin Août, Début Septembre* (Olivier Assayas), *L'Examen de Minuit* (1998) and *Je Suis un Assassin* (2004). In *Janis and John* (2003) he played a John Lennon lookalike, and then a TV-Shopping presenter in *France Boutique* (2004). In 2005, he played in Raoul Ruiz's *Le Domaine Perdu* which covered the 1973 coup in Chile.

2006 was an important year in his career. He was a touching, naïve, love-bound Formula 1 in Isabelle Carré's *Quatre Etoiles*. His role as Alexandre Beck in Guillaume Canet's *Ne le Dis à Personne* put him in another league and earned him the César for Best Actor in 2007.

In 2011, he starred alongside Omar Sy in the immensely successful *Intouchables* by Olivier Nakache and Éric Toledano.

In 2013, he starred in *En Solitaire* by Christophe Offenstein in which he played the role of Vendée Globe skipper Yann Kermadec.

French pole-vaulting ace **Renaud Lavillenie** was born on September 18, 1986, Barbezieux-Saint-Hilaire, in France's Charente region.

He established a new pole-vaulting record on February 15, 2014, with a jump of 6.16 metres which was one centimetre better than the effort of Ukraine's Sergueï Bubka 21 years previously.

Renaud Lavillenie belongs to the Clermont-Ferrand club Clermont Athlétisme Auvergne and was the gold medallist at the London Olympics on August 12, 2012, with a leap of 5.97 metres, a new Olympic record and the first athletics gold for France since 1996.

He also won the Indoor world title in Istanbul in 2012 and has won three European Outdoor crowns (2010/Barcelona, 2012/Helsinki and 2014/Zurich), plus three European Indoor titles (2009, 2011 and 2013) and three Outdoor world titles (one silver, two bronze). He also won the first five Diamond League meetings (2010-2014).

In 2014, he was voted Best Athlete by the IAAF (International Association of Athletics Federations).

## Michelin and the Rallye Monte-Carlo: a history of people and victories

In 1973, the then equivalent of the FIA (Fédération Internationale de l'Automobile) organised the first World Rally Championship which featured the most prestigious events of the day. Their numbers included the Rallye Monte-Carlo which continues to stand out as one of the sport's most important competitions. At the time, winning the 'Monte' actually took priority over winning the world title.

While the international governing body was working out the rules for the new series, the young engineer Pierre Dupasquier was named to run Michelin's new competition department in the firm's home town of Clermont-Ferrand, France.



To match the extreme conditions thrown at competitors by the Rallye Monte-Carlo, Michelin's contribution took the form of up to 60 different types of tyre!

The competition was stiff but Michelin was able to count on the expertise of its engineers to develop a range of competitive tyres, in addition to the advice provided to its partner teams by its experienced experts.

These trumps cards helped Michelin to win the very first round of the inaugural WRC, the 1973 Rallye Monte-Carlo, with the Alpine Renault A110 shared by Jean-Claude Andruet and lady co-driver Michèle 'Biche' Espinos-Petit.

It was the first of Michelin's 23 Rallye Monte-Carlo victories to date.

1973 – Andruet/'Biche' – Alpine Renault A110 1800  
1978 – Nicolas/Laverne – Porsche 911  
1979 – Darniche/Mahé – Lancia Stratos HF  
1981 – Ragnotti/Andrié – Renault 5 Turbo  
1982 – Röhrli/Geistdörfer – Opel Ascona 400  
1984 – Röhrli/Geistdörfer – Audi Quattro  
1985 – Vatanen/Harryman – Peugeot 205 T16  
1988 – Saby/Fauchille – Lancia Delta 4WD  
1989 – Biasion/Siviero – Lancia Delta Integrale  
1990 – Auriol/Occelli – Lancia Delta Integrale 16V  
1992 – Auriol/Occelli – Lancia HF Integrale 16V  
1993 – Auriol/Occelli – Toyota Celica Turbo 4WD  
1994 – Delecour/Grataloup – Ford Escort Cosworth  
1998 – Sainz/Moya – Toyota Corolla WRC  
1999 – Mäkinen/Mannisenmaki – Mitsubishi Lancer Evo VI  
2000 – Mäkinen/Mannisenmaki – Mitsubishi Lancer  
2001 – Mäkinen/Mannisenmaki – Mitsubishi Lancer  
2003 – Loeb/Elena – Citroën Xsara WRC  
2004 – Loeb/Elena – Citroën Xsara WRC  
2005 – Loeb/Elena – Citroën Xsara WRC  
2012 – Loeb/Elena – Citroën DS3 WRC  
2013 – Loeb/Elena – Citroën DS3 WRC  
2014 – Ogier/Ingrassia – Volkswagen Polo R WRC

Now headed by Pascal Couasnon, Michelin Motorsport is as motivated as ever to add to its Monte record. The number of tyre types produced for the event has been slimmed down over the years from up to 60 to just five thanks to a formidable technological evolution that has seen Michelin tyres become increasingly safer, faster, more versatile and more durable, in keeping with the philosophy of the MICHELIN Total Performance plan. At the same time, the technological breakthroughs introduced by Michelin in motorsport have been carried over gradually to road tyres, for the benefit of ordinary motorists.