

2019 LE MANS 24 HOURS



MICHELIN

THE SAME EXACTING STANDARDS FOR RACING AND ROAD TYRES!



Matthieu Bonardel, Director, Michelin Motorsport

Michelin's involvement with the Le Mans 24 Hours dates back many, many years. It's a race we have won 27 times in total, and that includes an ongoing run of 21 victories which we are hoping to extend further this time around, in addition to topping all four classes to crown what has been a memorable 'Super Season' for endurance racing fans.

At Michelin, this engagement doesn't just concern motorsport. It also drives our everyday determination to satisfy our customers.

Michelin believes that all motorists have the right to benefit from the performance of their tyres from the moment they are fitted until the very end of their working life, just as racing drivers need to have confidence in the capacity of their tyres to deliver from the start to the finish of every race.

There is no reason why ordinary motorists should not be as demanding as racing drivers, and everyone deserves to be able to have confidence in the performance of their tyres throughout the latter's life.

This is why Michelin welcomes the recent decisions of the European Parliament which has come out in favour of reinforcing safety standards by introducing tests involving worn tyres from 2022.

In addition to offering enhanced safety, this move has the added benefit of reducing the impact on the environment and will avoid the early replacement of tyres which currently results in an excessive consumption of raw materials.

Just as it has always done, Michelin continues to champion long-lasting performance, for racing and road tyres alike!

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THE CIRCUIT AND THE DEMANDS PLACES ON TYRES

ENGINEERED FOR LONG-LASTING PERFORMANCE

Every June, Le Mans provides Michelin with the perfect opportunity to demonstrate the long-lasting performance qualities of its tyres.

This notion of performance covers much more than simply their road-holding ability, however. It also encompasses such vital considerations as the safety they provide through their braking efficiency, as well as their directional precision and traction ability – notably in racing – in order to transmit the power generated by the vehicle they are on to the ground as efficiently as possible. And all these qualities need to last over time, in dry and wet conditions alike.

In racing, the balance of a tyre's overall performance package must allow the drivers to keep pushing stint after stint, and complete multiple stints when necessary. Indeed, being able to count

on tyres that consistently deliver the expected level of performance is fundamental to the drivers' confidence behind the wheel and, at the end of the day, their result.

The emphasis on long-lasting performance has always been embedded in endurance racing's DNA and is especially embodied by the Le Mans 24 Hours – the world's greatest race, and one of the longest. It has long stood out as a unique contest where the drivers need to be certain that their tyres will enable them to push consistently hard from start to finish.

The way any given tyre performs in the course of its working life is subject to decisions manufacturers make at the design stage and calls not only for commitment but also considerable investment in research and development.





That said, developing tyres that maintain their performance characteristics all the way to the chequered flag – or to their wear indicator bar in the case of a road tyre – is no easy matter.

Michelin is actively in favour of legislation that acts in the interests of road safety, the defence of its customers' purchasing power and protection of the environment.

As things stand, European tyre legislation only requires braking performance on wet roads to be measured when a tyre is new, even though this crucial safety-related parameter diminishes in the course of its working life.

Many brands design tyres that remain safe all the way down to their wear-indicator bars (1.6mm),

but there is currently nothing to prevent the marketing of tyres whose braking distances deteriorate significantly as they wear. The absence of any ruling that prescribes a minimum standard when a tyre is worn can incite trade professionals and vehicle owners to fit new tyres before the legal limit is reached*.

Changing tyres early can equate to up to 128 million additional tyres per year in Europe**, resulting in 6.6 million tonnes of emissions** and an expenditure of €6.9 billion***.

In addition to providing superior safety, new legislation would deter unnecessary expenditure and contribute to protecting the environment by avoiding needless wastage of raw materials and preventable CO₂ emissions.

(*) Subject to even tyre wear and compliance with tyre and vehicle manufacturers' recommendations. When in doubt, ask a specialist. French ministerial ruling dated September 18, 1991, superseding the ruling of July 29, 1970, appertaining to the characteristics and conditions of use of vehicles and their trailers, published in France's Journal Officiel dated October 8, 1991.

(**) Calculation carried out at Michelin's Technology Centre in Ladoux, near Clermont-Ferrand, France. Technical Bulletin dated September 27, 2016, entitled "Les Matières premières, la consommation de carburant et les émissions de CO₂ liés au remplacement précoce des pneus Tourisme" (Raw materials, fuel consumption and CO₂ emissions resulting from the early changing of passenger car tyres). (***) Source: "Planned Obsolescence Is Not Inevitable", published by Ernst & Young (May 2017).

FOR MICHELIN, LE MANS SERVES AS A LABORATORY THAT BENEFITS ITS CUSTOMERS AND PARTNERS

The principle of delivering lasting, balanced performance over time has long been a key focus of the research work carried out by Michelin's engineers and technicians, as well as an important area of investment for the company.

All the technologies that prove their worth in motorsport are ultimately carried over to the brand's road tyres.

For Michelin, racing serves as a life-size laboratory that is beneficial to its partners and customers alike, and this has always been the chief reason for Michelin's longstanding involvement in the sport, on two wheels and four.

Motorsport effectively provides the Group with a means to put its tyres through their paces in conditions that are impossible to replicate in a laboratory, the objective being to put new technologies, architectures and materials through their paces in extreme conditions before many of them are carried over to road tyres, either in part or totally, some years later.

Michelin's involvement across such a wide variety of world-class championships for so many decades has enabled its tyres to benefit from the huge quantity of data it has acquired, and each discipline has different specificities that allow numerous aspects of tyre technology to be explored.

The most recent beneficiaries of Michelin's sporting heritage are the tyres that make up the MICHELIN Pilot Sport family (Pilot Sport 4, Pilot Sport 4S, Pilot Sport SUV, Pilot Sport Cup 2 R) which incorporate technologies and/or materials whose development incorporated lessons learned by the Group on the racetrack.

This tie-in between racing and road tyres is consequently fundamental for Michelin.

Long-lasting performance is core to endurance racing in general, and to the Le Mans 24 Hours in particular, and, this year again, the tyres of many of the 53 cars Michelin is working with pack technologies that the company is evaluating for its upcoming road-tyre ranges.



A FITTING FINALE FOR THE FIA WEC'S 'SUPER SEASON'



For the first time since its creation in 2012, the 2018/2019 FIA World Endurance Championship straddled two calendar years, with an eight-round schedule including two visits to Le Mans. Fittingly, it is with this great race that the current campaign will conclude on June 15-16.

In the wake of the in-depth changes to the technical regulations that were introduced in 2017, notably concerning the number of sets of tyres cars could use at each race (four instead of the previous allocation of six in the case of LM P1 and LM GTE Pro runners at six-hour races), the quota rule evolved for the 2018/2019 championship and the regulations no longer reason in terms of tyre sets (one set = four tyres). Instead, they now take into account the actual number of tyres cars are authorised to consume at each round. At the same time, the two so-called 'joker' tyres that teams were allowed to run at any point over the weekend are now incorporated in the qualifying and race package.

This means that for the 2019 Le Mans 24 Hours, teams have a total allocation of 28 tyres for free practice, qualifying and the warm-up session (LM P1 and LM P2), and 32 tyres in LM GTE-Pro and LM GTE-Am. The allowance for the race itself is 48 tyres in LM P1, 56 in LM P2 and 60 in the two LM GTE classes.

In another development for 2018/2019, teams were authorised to change wheels with refuelling

in progress. This rule has clearly had an impact on race strategies and has led to the use of a higher number of tyres in certain circumstances (see interview with Jérôme Mondain). This move has had a different impact at each race, since the maximum tyre allowance per car means drivers are forced to double stint. This won't be the case next season, however, when the teams' mechanics will again have to wait for refuelling to be completed before they are able to swap tyres, a change that will see tyre strategies play an important role in the way races unfold once more.

More generally, Michelin believes that enforcing technical regulations that are relevant incites all the stakeholders to invest in energy efficiency and sporting efficiency without detracting from the spectacle for spectators.

The combination of restricting the number of tyres cars can use at each race while delivering durable, high performance fits perfectly with Michelin's vision of motorsport.

It is important to note that careful management of raw materials and energy, while working to reduce CO₂ emissions – during both the production and recycling phases – are key to sustainable mobility and protection of the environment. These measures are consequently seen as priorities by Michelin and the FIA World Endurance Championship which both actively defend strong environmental values.

MICHELIN'S TYRES FOR THE 2019 LE MANS 24 HOURS

LM P1



DIFFERENT TYRES FOR HYBRID AND NON-HYBRID CARS

At Le Mans, as in the FIA World Endurance Championship, the LM P1 field comprises hybrid and non-hybrid prototypes. The former features the two TS050 Hybrids that Toyota Gazoo Racing has entered for the French race. They will face opposition from the non-hybrid cars entered by ByKolles Racing, Dragonspeed, Rebellion Racing and SMP Racing who, between them, are running six prototypes featuring four types of chassis and four different engines. The clear difference between the characteristics of the hybrid and non-hybrid cars and the different demands they make on their tyres have led Michelin to develop specific ranges to address the respective requirements of each category, although both feature the same three compound appellations as far as dry-weather slicks are concerned:

- **Soft**
- **Medium**
- **Hard**

The terms Soft, Medium and Hard – which have been applied to all four classes in 2018/2019 – help to understand the teams' strategies, while at the same time carrying over the notion of 'temperature window' which Michelin introduced five years ago to facilitate its dialogue with the teams' engineers.

The hybrid and non-hybrid LM P1 prototypes run the same size front and rear tyres (31/71R18).

In addition to dry-weather slicks, the French firm's range also includes the Michelin Hybrid, an 'intermediate' slick that was designed for damp and drying conditions, as well as Wets and Full Wets in the case of heavier rain.

Whereas teams are required to nominate two of the three available types of slick all rounds of the FIA WEC except Le Mans two weeks before the race, so they must adjust their strategies as a function of the weather. At Le Mans, they are able to choose between all three compounds.

THE DIFFERENCES BETWEEN MICHELIN'S TYRES FOR THE HYBRID AND NON-HYBRID PROTOTYPES

Michelin designs tyres for all of the different types of vehicle and technology that play a part in mobility today. This applies equally to motor racing, where the constructions and compounds of its tyres are adapted as a function of the weight distribution of the different cars, the aerodynamic downforce they generate, as well as their power

output, torque characteristics and type of powertrain. The LM P1 Hybrid prototypes feature four-wheel drive transmission, whereas the non-hybrid LM P1s are exclusively rear-wheel drive. They therefore necessitated bespoke development work on specific constructions and compounds, especially in the case of the front tyres

LM P2



THE BENEFIT OF EXPERIENCE

The 2018 Le Mans 24 Hours marked Michelin's return to LM P2 and its tyres for this class benefit from the experience it acquired in the European Le Mans Series. The firm's engineers have used the data collected in the ELMS to advance simultaneously in several of the numerous areas that contribute to the global performance of a racing tyre. As in the FIA WEC's other classes, the range features a choice of three compounds (Soft, Medium and Hard), while two rain tyres are available in compliance with the

regulations that apply to this class (in LM P1, there are no restrictions concerning the number of wet weather compounds).

One is an intermediate tyre with a lightly grooved tread and an operating window similar that of the Hybrid slick available for the LM P1 cars. The alternative for the LM P2 prototypes is a more conventional rain tyre with a construction adapted to poor conditions and a higher sea-to-land ratio. The size of Michelin's LM P2 tyres is 30/68-18 (front) and 31/71-18 (rear).

LM GTE Pro



LM GTE Am



DIFFERENT TYRES FOR EACH CAR

Michelin's close work with all of its FIA WEC partners has led to the development of specific tyres to cover the models' different technical characteristics so that the drivers can use the full potential of their respective cars. In May 2018, at the beginning of the 2018/2019 Super Season, newcomers BMW Team MTEK and Aston Martin Racing joined Ferrari, Ford and Porsche as Michelin partners. Development was a complex process, but the engineers' mission was eased by the company's

capacity for innovation and the privileged relationship it enjoys with its partners. Meanwhile, prior to the 2018/2019 championship, the LM GTE Am cars used the tyres used by the LM GTE Pro machines the previous season. Today, both classes have access to the same-generation solutions. This change stems from the fact that the cars' homologation now spans a period of several years and the technical specifications of the Pro and Am cars are relatively similar. Here again, the availability of three compounds applies (Soft, Medium and Hard).

JÉRÔME MONDAIN, MANAGER OF MICHELIN'S FIA WORLD ENDURANCE CHAMPIONSHIP PROGRAMME



We are coming to the end of the FIA WEC Super Season and Michelin is still using the same tyres as in last year's Le Mans 24 Hours. Why is that?

That decision was not taken by Michelin. With the Super Season including two editions of the Le Mans 24 Hours and the championship regulations forbidding any modifications to the tyres in the course of the campaign, we have been obliged to use the same tyres two years in a row, for the first – and, I would suggest, the last – time. Of course, this can be viewed in a positive light too, since it means we already have a solid understanding of our tyres' characteristics and all the data from the 2018 race. The one thing we clearly cannot predict, however, is the weather, which frequently plays a major role at Le Mans – so whilst this prior knowledge is certainly useful, we cannot take anything for granted.

This season, the rules permitted tyre changes at the same time as refuelling during pit-stops. Did that change anything as far as the teams' strategies are concerned?

With regard to the WEC's six and eight-hour races, not a great deal changed in truth, since the allotted number of tyres per car meant drivers frequently had to double-stint. Saying that, at Le Mans in 2018, the LMP1 teams generally worked their way through 12 sets of tyres – the maximum permitted by the regulations, compared with 2017 when they managed with just nine or ten sets. Teams judged that there was no benefit in keeping the same tyres on for four or five stints, even if their performance remained consistent. Their strategies were based upon a very simple calculation: the total number of stints divided by the number of sets of tyres allowed per race. That said, it is important to note that next season's rules are set to evolve again, re-introducing the ban on tyre changes during refuelling. This means the major role played by tyres – and the consistency of their performance over long distances – will return to the fore.

What will happen to the 11,000 tyres that you have brought to Le Mans once the race is over?

A large proportion of the tyres for Le Mans and, indeed for the World Championship in general, are classified as 'top-secret'. This is because they feature new technological developments that we wish to trial in real-life conditions through the medium of motorsport, with the aim of subsequently incorporating them into our road tyres that go on sale to the general public. For that reason, we retrieve all of the tyres at the end of the race in order to analyse them before recycling them, which we do both to preserve their secrets and because we are acutely aware of the necessity to care for the environment. This means that whilst Michelin's current tyres will be seen in action for the final time this year at Le Mans, some of the technologies they pack will live on beyond the racetrack. For next season, new ranges are already being developed.

THE PARTNERS

The 2019 Le Mans 24 Hours on June 15-16 will see 62 cars take to the track – two more than last year. Michelin is providing tyres for 53 of them, which means 159 of the 186 drivers set to compete will do so using our products. The brand will additionally supply all 50 cars in the Road to Le Mans race, which takes place on the morning of Saturday, June 15.



LM P1

1 • REBELLION RACING - REBELLION R13 - GIBSON
NEEL JANI - ANDRÉ LOTTERER - BRUNO SENNA

3 • REBELLION RACING - REBELLION R13 - GIBSON
THOMAS LAURENT - NATHANAËL BERTHON - GUSTAVO MENEZES

4 • BYKOLLES RACING TEAM - ENSO CLM P1/01 - NISMO
TOM DILLMANN - OLIVER WEBB - PAOLO RUBERTI

7 • TOYOTA GAZOO RACING - TOYOTA TS050 - HYBRID HYBRID
MIKE CONWAY - KAMUI KOBAYASHI - JOSE MARIA LOPEZ

8 • TOYOTA GAZOO RACING - TOYOTA TS050 - HYBRID HYBRID
SÉBASTIEN BUEMI - KAZUKI NAKAJIMA - FERNANDO ALONSO

10 • DRAGONSPEED - BR ENGINEERING BR1 - GIBSON
HENRIK HEDMAN - BEN HANLEY - RENGER VAN DER ZANDE

11 • SMP RACING - BR ENGINEERING BR1 - AER
VITALY PETROV - MIKHAIL ALESHIN - STOFFEL VANDOORNE

17 • SMP RACING - BR ENGINEERING BR1 - AER
STÉPHANE SARRAZIN - EGOR ORUDZHEV - SERGEY SIROTKIN

LM P1 (hybrid)

Michelin will equip Toyota Gazoo Racing's two Toyota TS-050 Hybrid prototypes which are being shared by the same crews as last year, namely Kamui Kobayashi, Mike Conway and José Maria Lopez (N°7), and Sébastien Buemi, Kazuki Nakajima and Fernando Alonso (N°8). At the end of this race, the two-time Formula 1 World Champion will draw a line underneath his time in endurance racing. It should be noted that Toyota will be the only manufacturer to field hybrid cars, but they will battle for glory in the same class as their non-hybrid rivals.

LM P1 (non-hybrid)

There are six non-hybrid LMP1 entries, all running on Michelin tyres. There are two Rebellions, whose N°1 car is shared by André Lotterer (a three-time winner of the event with Audi and Michelin), Neel Jani (who won the race with Porsche in 2016 on his way to that year's world title) and Bruno Senna. In the other Rebellion, Frenchmen Thomas Laurent and Nathanaël Berthon are joined by America's Gustavo Menezes. SMP Racing will similarly enter two cars, with one each for ByKolles Racing Team and Dragonspeed.

LM P2

**22 • UNITED AUTOSPORTS - LIGIER JSP217 - GIBSON
PHILIP HANSON - FILIPE ALBUQUERQUE - PAUL DI RESTA**

**29 • RACING TEAM NEDERLAND - DALLARA P217 - GIBSON
FRITS VAN EERD - GIEDO VAN DER GARDE - NYCK DE VRIES**

**30 • DUQUEINE ENGINEERING - ORECA 07 - GIBSON
NICOLAS JAMIN - PIERRE RAGUES - ROMAIN DUMAS**

**31 • DRAGONSPEED - ORECA 07 - GIBSON
ROBERTO GONZALEZ - PASTOR MALDONADO - ANTHONY DAVIDSON**

**32 • UNITED AUTOSPORTS - LIGIER JSP217 - GIBSON
RYAN CULLEN - ALEX BRUNDLE - WILLIAM OWEN**

**34 • INTER EUROPOL COMPETITION - LIGIER JSP217 - GIBSON
JAKUB SMIECHOWSKI - NIGEL MOORE**

**36 • SIGNATECH ALPINE MATMUT - ALPINE A470 - GIBSON
NICOLAS LAPIERRE - ANDRÉ NEGRAO - PIERRE THIRIET**

**39 • GRAFF - ORECA 07 - GIBSON
TRISTAN GOMMENDY - VINCENT CAPILLAIRE - JONATHAN HIRSCHI**

**48 • IDEC SPORT - ORECA 07 - GIBSON
PAUL LAFARGUE - PAUL-LOUP CHATIN - MEMO ROJAS**

**50 • LARBRE COMPETITON - LIGIER JSP217 - GIBSON
ERWIN CREED - ROMANO RICCI - NICHOLAS BOULLE**

This year, Michelin is supplying ten of the 20 LMP2 prototypes. The 2018/2019 FIA WEC has seen the French manufacturer double its presence in the class, having partnered only seven cars at Le Mans in 2018. Amongst Michelin's new teams are United Autosport – who will field a brace of Ligier JSP 217-Gibson prototypes – and Duqueine Engineering. The latter's Oreca 07 Gibson will be crewed by Nicolas Jamin, Pierre Ragues and Romain Dumas, who has previously won the race twice in LMP1 (in 2010 with Audi and six years later with Porsche, both times on Michelin tyres).



LM GTE Pro

51 • AF CORSE - FERRARI 488 GTE EVO
ALESSANDRO PIER GUIDI - JAMES CALADO - DANIEL SERRA

63 • CORVETTE RACING - CHEVROLET CORVETTE C7.R
JAN MAGNUSSEN - ANTONIO GARCIA - MIKE ROCKENFELLER

64 • CORVETTE RACING - CHEVROLET CORVETTE C7.R
OLIVER GAVIN - TOM MILNER - MARCEL FASSLER

66 • FORD CHIP GANASSI TEAM UK - FORD GT
STEFAN MÜCKE - OLIVIER PLA - BILLY JOHNSON

67 • FORD CHIP GANASSI TEAM UK - FORD GT
ANDY PRIAULX - HARRY TINCKNELL - JONATHAN BOMARITO

68 • FORD CHIP GANASSI TEAM USA - FORD GT
JOEY HAND - DIRK MÜLLER - SÉBASTIEN BOURDAIS

69 • FORD CHIP GANASSI TEAM USA - FORD GT
RYAN BRISCOE - RICHARD WESTBROOK - SCOTT DIXON

71 • AF CORSE - FERRARI 488 GTE EVO
DAVIDE RIGON - SAM BIRD - MIGUEL MOLINA

81 • BMW TEAM MTEK - BMW M8 GTE
NICKY CATSBURG - MARTIN TOMCZYK - PHILIPP ENG

82 • BMW TEAM MTEK - BMW M8 GTE
AUGUSTO FARFUS - ANTONIO FELIX DA COSTA - JESSE KROHN

89 • RISI COMPETIZIONE - FERRARI 488 GTE EVO
PIPO DERANI - OLIVER JARVIS - JULES GOUNON

91 • PORSCHE GT TEAM - PORSCHE 911 RSR
RICHARD LIETZ - GIANMARIA BRUNI - FRÉDÉRIC MAKOWIECKI

92 • PORSCHE GT TEAM - PORSCHE 911 RSR
MICHAEL CHRISTENSEN - KEVIN ESTRE - LAURENS VANTHOOR


93 • PORSCHE GT TEAM - PORSCHE 911 RSR
PATRICK PILET - EARL BAMBER - NICHOLAS TANDY

94 • PORSCHE GT TEAM - PORSCHE 911 RSR
SVEN MÜLLER - MATHIEU JAMINET - DENNIS OLSEN

95 • ASTON MARTIN RACING - ASTON MARTIN VANTAGE AMR
NICKI THIIM - MARCO SØRENSEN - DARREN TURNER

97 • ASTON MARTIN RACING - ASTON MARTIN VANTAGE AMR
MAXIME MARTIN - ALEXANDER LYNN - JONATHAN ADAM

48 • IDEC SPORT - ORECA 07 - GIBSON
PAUL LAFARGUE - PAUL-LOUP CHATIN - MEMO ROJAS



This is a fiercely competitive class, in which Michelin supplies the entire, 17-strong grid. Existing big-name manufacturers Ferrari, Ford, Corvette and Porsche have this season faced two new rivals in the shape of BMW and Aston Martin, the latter bringing its new Vantage to the track and BMW debuting the M8 GTE which is also involved in IMSA's WeatherTech Sports-Car Championship. This is a North American endurance racing series, in which Michelin has played a leading role since the beginning of 2018 and which includes such iconic races as the Rolex 24 At Daytona, Mobil 1 Twelve Hours of Sebring and Petit Le Mans. The latter will take place in October at Michelin Raceway Road Atlanta. At Le Mans, a spectacular scrap awaits between two Corvette C7-Rs, three Ferrari 488 GTE EVOs, two Aston Martin Vantage AMRs, four Ford GTs, four Porsche 911 RSRs and two BMW M8 GTEs.

LM GTE Am

**54 • SPIRIT OF RACE - FERRARI 488 GTE
THOMAS FLOHR - FRANCESCO CASTELLACCI - GIANCARLO FISICHELLA**

**56 • TEAM PROJECT 1 - PORSCHE 911 RSR
JÖRG BERGMEISTER - PATRICK LINDSEY - EGIDIO PERFETTI**

**57 • CAR GUY RACING - FERRARI 488 GTE
TAKESHI KIMURA - KEL FRANCESCO COZZOLINO - COME LEDOGAR**

**60 • KESSEL RACING - FERRARI 488 GTE
CLAUDIO SCHIAVONI - SERGIO PIANEZZOLA - ANDREA PICCINI**

**61 • CLEARWATER RACING - FERRARI 488 GTE
LUIS PEREZ COMPANC - MATTHEW GRIFFIN - MATTEO CRESSONI**

**62 • WEATHERTECH RACING - FERRARI 488 GTE
COOPER MACNEIL - TONI VILANDER - ROBERT SMITH**

**70 • MR RACING - FERRARI 488 GTE
MOTOAKI ISHIKAWA - OLIVIER BERETTA - EDWARD CHEEVER**

**77 • DEMPSEY-PROTON RACING - PORSCHE 911 RSR
MATT CAMPBELL - CHRISTIAN RIED - JULIEN ANDLAUER**

**78 • PROTON COMPETITION - PORSCHE 911 RSR
LOUIS PRETTE - PHILIPPE PRETTE - VINCENT ABRIL**

**83 • KESSEL RACING - FERRARI 488 GTE
MANUELA GOSTNER - RAHEL FREY - MICHELLE GATTING**

**84 • JMW MOTORSPORT - FERRARI 488 GTE
EFFREY SEGAL - RODRIGO BAPTISTA - WEL LU**

**85 • KEATING MOTORSPORTS - FORD GT
BEN KEATING - JEROEN BLEEKEMOLEN - FELIPE FRAGA**

**86 • GULF RACING - PORSCHE 911 RSR
MICHAEL WAINWRIGHT - BENJAMIN BARKER - THOMAS PREINING**

**88 • DEMPSEY-PROTON RACING - PORSCHE 911 RSR
SATOSHI HOSHINO - GIORGIO RODA - MATTEO CAIROLI**

**90 • TF SPORT - ASTON MARTIN VANTAGE
SALIH YOLUC - EUAN HANKEY - CHARLES EASTWOOD**

**98 • ASTON MARTIN RACING - ASTON MARTIN VANTAGE
PAUL DALLA LANA - PEDRO LAMY - MATHIAS LAUDA**

**99 • DEMPSEY-PROTON RACING - PORSCHE 911 RSR
PATRICK LONG - RACY KROHN - NICLAS JÖNSSON**

Here too, there are 17 entries – eight more than in last year's race – all of which are supplied by Michelin. The makes and models are similar to those which star in the LM GTE Pro category. In this class, however, we see just one Ford GT and two Aston Martins, up against no fewer than eight Ferrari 488 GTEs and six Porsche 911 RSRs. A point of interest is that the N°83 Kessel Racing Ferrari 488 GTE will be shared by the all-lady trio of Manuela Gostner, Rahel Frey and Michelle Gattling.

MICHELIN AND LE MANS IN NUMBERS



53

CARS COMPETING ON
MICHELIN TYRES



11 000

MICHELIN TYRES



28

SEMI-TRAILERS



800 m²

COVERED TYRE-FITTING WORKSHOP



1 300 m²

COVERED STORAGE SPACE

MICHELIN STAFF



105

TYRE ALLOWANCE FOR THE RACE

LM P1

48

LM GTE Pro

60

LM P2

56

LM GTE Am

60

200

THE NUMBER OF
INGREDIENTS USED
TO MAKE A MICHELIN
ENDURANCE TYRE

6 500

THE NUMBER OF TIMES EACH
TYRE FLEXES DURING A LAP
OF LE MANS, EQUIVALENT TO
84,500 FLEXES DURING A STING
OF 13 LAPS

10

MICHELIN ENDURANCE RACING
TYRES ARE CAPABLE OF
WITHSTANDING LOADS (CAR'S
WEIGHT + AERODYNAMIC
DOWNFORCE) OF UP TO 10 TIMES
THEIR OWN WEIGHT

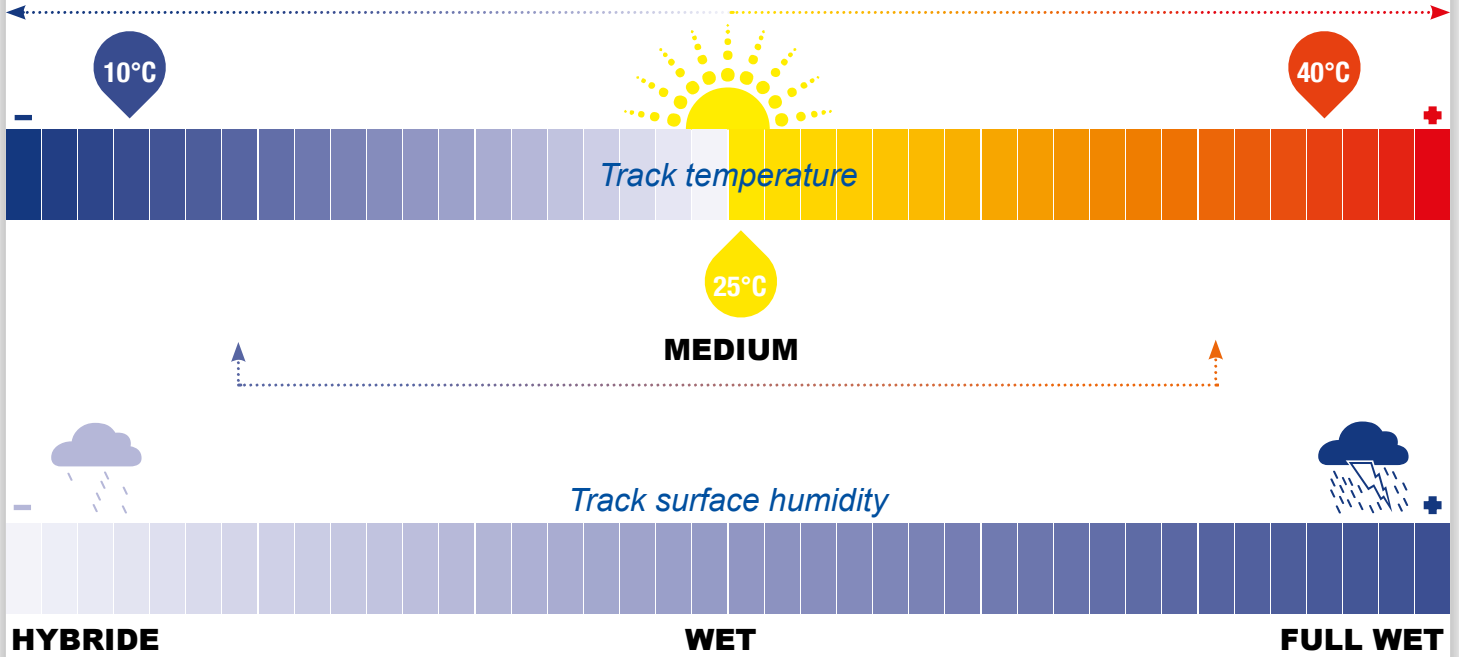
TYRES AVAILABLE FOR MICHELIN'S PARTNERS

LM P1

SIZE: 31/71-18 (FRONT AND REAR)

SOFT

HARD

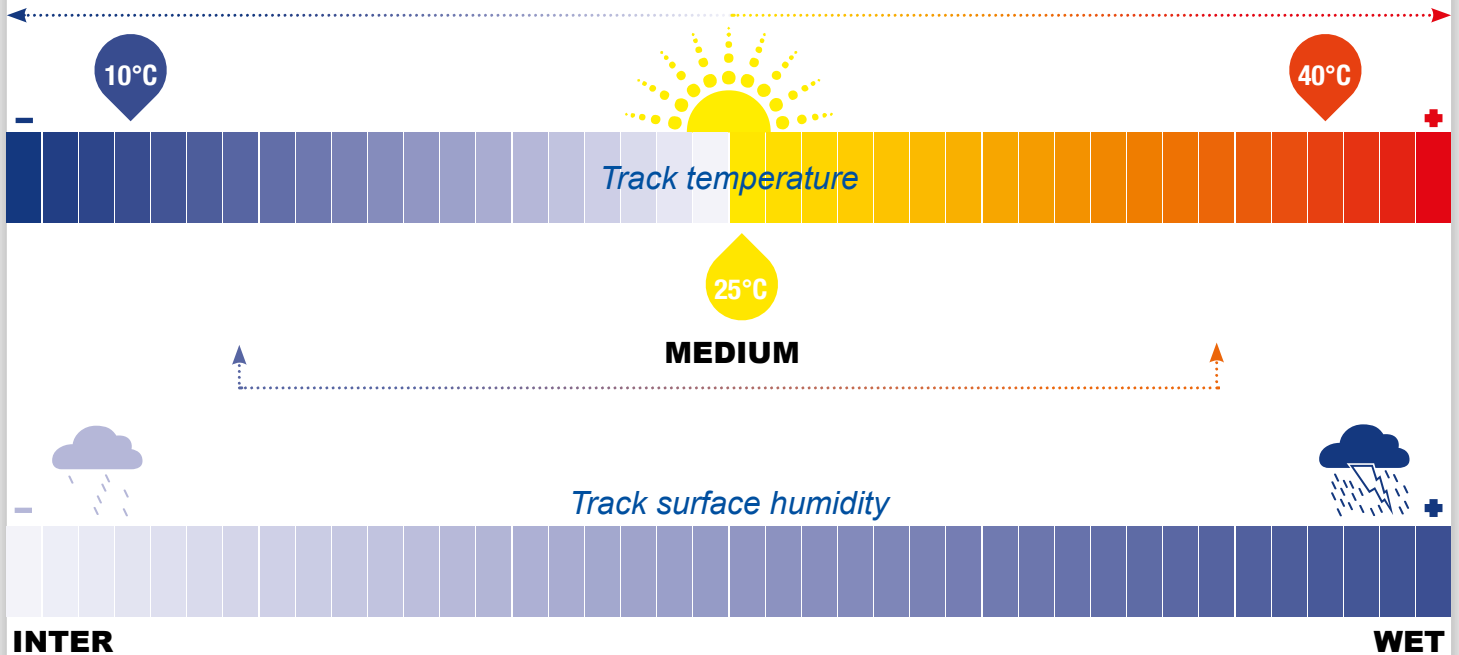


LM P2

SIZE: 30/68-18 (FRONT) / 31/71-18 (REAR)

SOFT

HARD

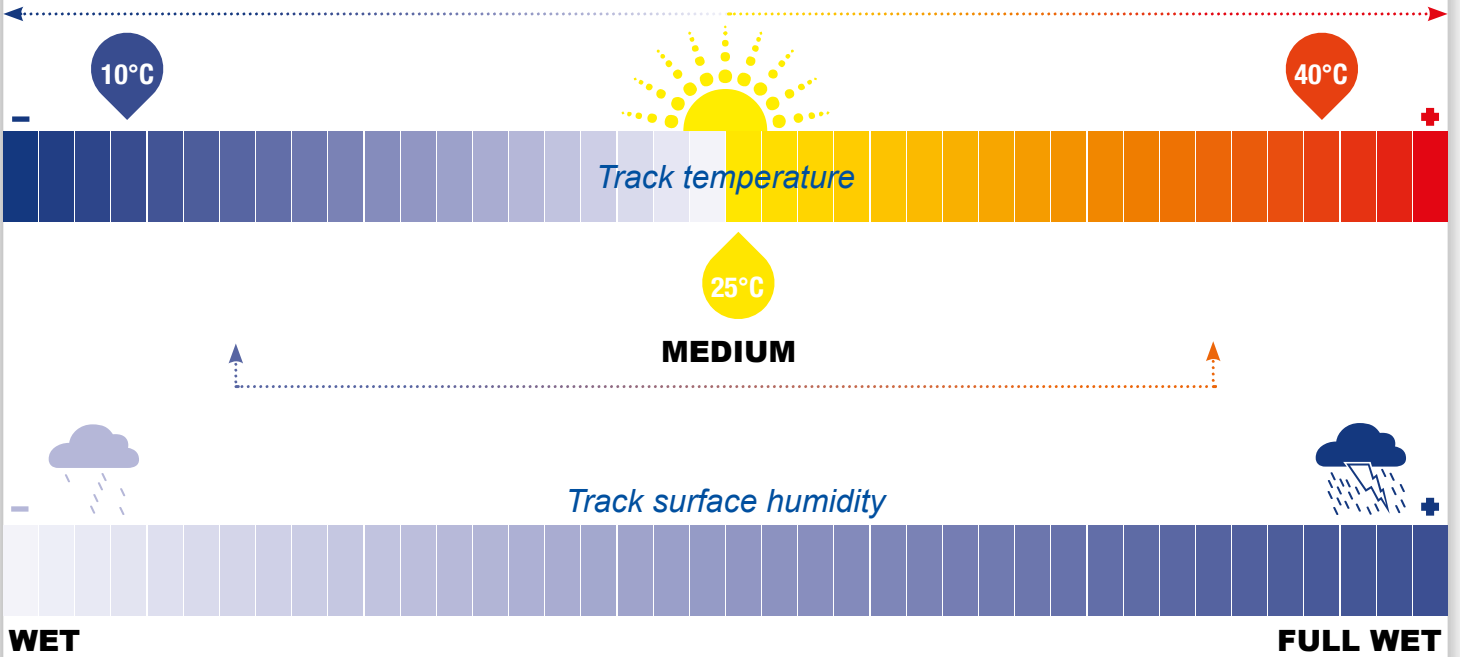


LM GTE Pro

SIZE: 30/68-18 (FRONT) / 31/71-18 (REAR)

SOFT

HARD

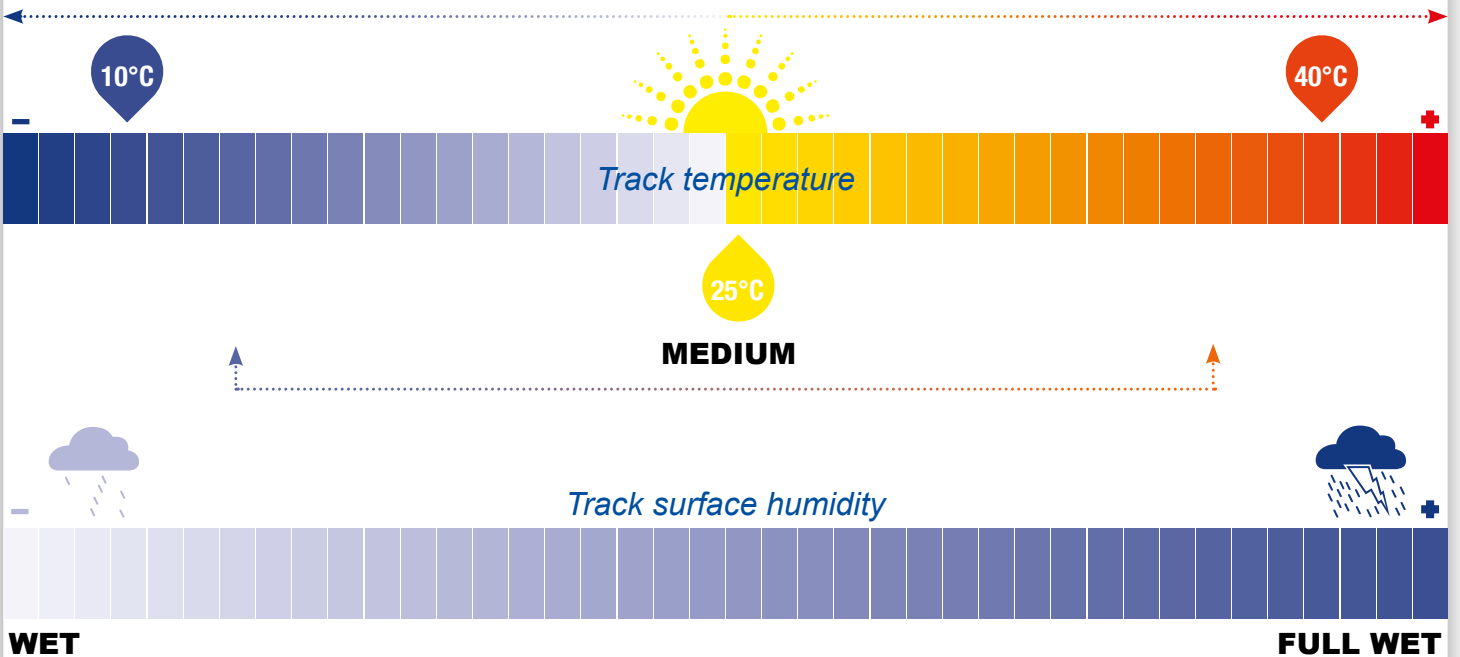


LM GTE Am

SIZE: 30/68-18 (FRONT) / 31/71-18 (REAR)

SOFT

HARD



THE CIRCUIT AND THE DEMANDS PLACES ON TYRES

1• DUNLOP CURVE

Lateral grip, braking under cornering

2• TERTRE ROUGE

Lateral grip

3• 1ST AND 2ND CHICANE / MULSANNE TURN

Bite as driver hits the brakes, stability under braking, traction on exit

4• NDIANAPOLIS

Lateral grip, cornering stability

5• ARNAGE

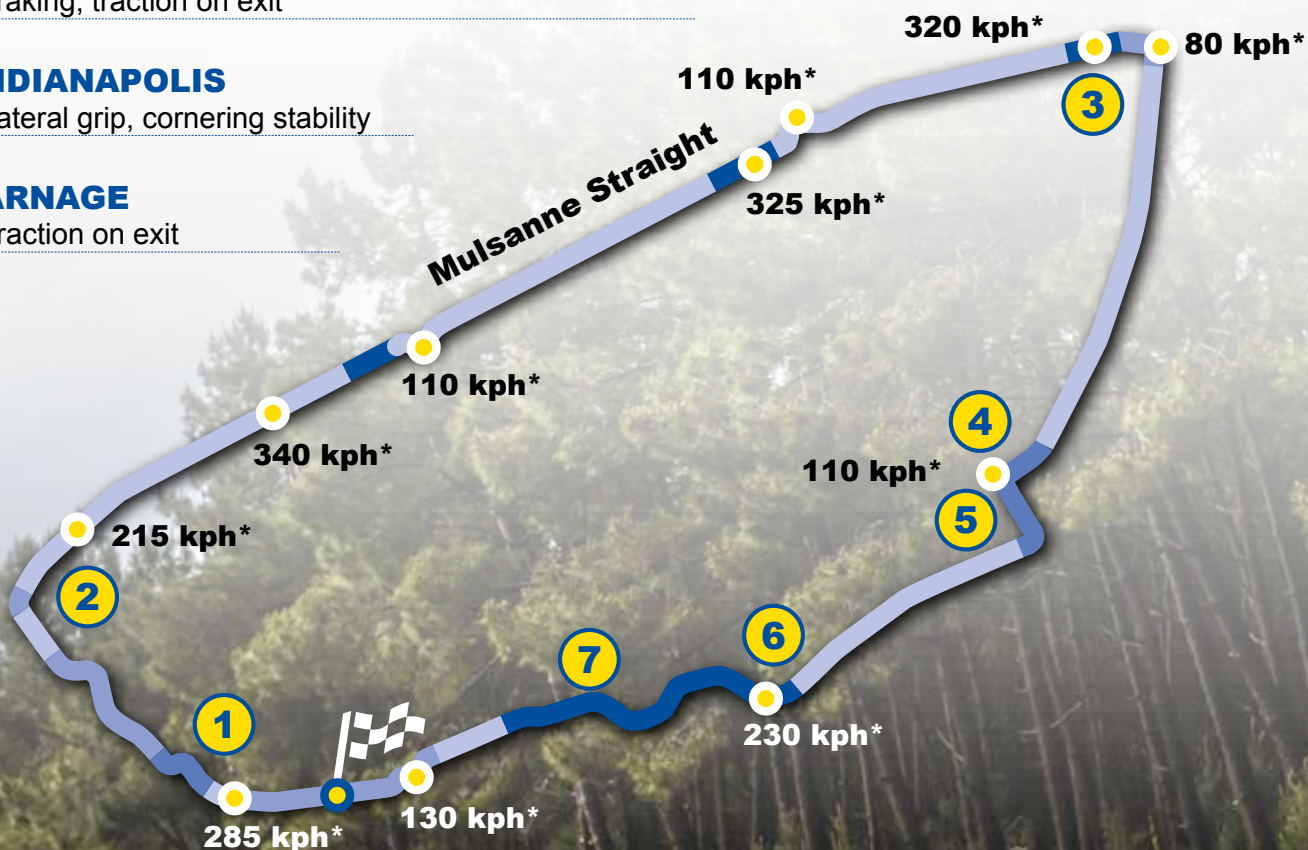
Traction on exit

6• PORSCHE CURVES

Lateral grip, cornering stability

7• KARTING AND FORD CHICANE

Lateral grip



*Approximate speeds

- Normal demands on tyres
- High demands on tyres
- Very high demands on tyres
- Maximum demands on tyres