



### INTRODUCTION

- 4 Why Michelin?
- 6 #WeRaceForChange
- 8 Record's
- 12 Technologies
- 18 Video tutorials

# 20 - SERVICES & SOLUTIONS

- 22 MICHELIN Tire simulation
- 24 MICHELIN Track connect
- 25 MICHELIN RFID Reader

# **26 - RALLY**

- 28 Advice and pressures
- 30 Recutting
- 36 Asphalt & snow rally
- 38 MICHELIN Pilot Sport Pro Rally
- 40 MICHELIN Pilot Sport A
- 42 MICHELIN Pilot Sport A MW1
- 44 MICHELIN Pilot Sport R
- 45 MICHELIN Pilot Sport R version GT
- 46 MICHELIN Pilot Alpin

- 48 Ice rally
- 49 MICHELIN X-ICE North
- 50 Gravel rally
- 52 MICHELIN Pilot Sport Gravel
- 54 MICHELIN LTX Force
- 55 MICHELIN LTX Force T XL
- 56 Technical data

# 58 - CLASSIC COMPETITION

- 59 Advice and pressures
- 60 MICHELIN TB5+
- 61 MICHELIN TB15+
- 61 MICHELIN PB20
- 62 Technical data

# 64 - HILL CLIMB

- 65 Advice and pressures
- 66 MICHELIN Pilot Sport H S5C+
- 67 Technical data

# 68 - CIRCUIT

- 70 Advice and pressures
- 72 Touring, GT, Prototype
- 74 MICHELIN Pilot Sport Pro GT
- 76 MICHELIN Pilot Sport Cup GT
- 78 MICHELIN Pilot Sport Cup <sup>™</sup>
- 80 MICHELIN Pilot Sport GT M
- 81 MICHELIN Pilot Sport GT M+
- 82 MICHELIN Pilot Sport GT L

- 83 MICHELIN Pilot Sport GT P2L
- 83 MICHELIN Pilot Sport GT P2H
- 84 Porsche cup
- 86 MICHELIN Pilot Sport Cup N3 & N3R 92 Technical data
- 87 MICHELIN Porsche Cup N2 & N2R
- 88 Single-seater
- 89 MICHELIN Pilot Sport M S512
- 89 MICHELIN Pilot Sport M P512

# 90 - Prototype legend

- 91 MICHELIN Pilot Sport Legend S819
- 91 MICHELIN Pilot Sport Legend P219

# 94 - TECHNICAL DATA

- 95 Reading a tire
- 96 Recognizing and acting
- 98 Damage on the tires
- 100 Advice and use
- 106 Recommendations

# **WHY MICHELIN?**

# MICHELIN, TRUSTED TIRES IN MOTORSPORT

1st tire brand by value in 2022

. MICHELIN, the very first tire to win the 24 Hours of Le Mans and the winner every year since 1998.

. Since its first participation in the MotoGP $^{\rm IM}$  Championship (1973), Michelin has won over 500 races and 33 world titles.

. Michelin has been the exclusive supplier to the Porsche Supercup since 2002 and equips many Porsche Carrera Cups around the world: Germany, France, Great Britain, Italy, Scandinavia, Benelux, Asia, Japan and Australia.

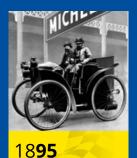
. Since the start of the WRC in 1973, Michelin has supplied top-quality tires on all terrains across the globe.



# A PIONEER IN MOBILITY INNOVATION SINCE 1889 (2)



First patent for a removable and repairable bicycle tire for competition use.



L'Eclair, the first car to run on air-filled MICHELIN tires in the Paris-Bordeaux-Paris race.



Lancia Aurelia B20 GT equipped with radial tires wins the 24 Hours of Le Mans.



Michelin invents the slick tire at Le Mans, with its smooth tread for better grip on dry surfaces.

<sup>(1)</sup> Brand Finance calculates brand value using the methodology which determines the value a company would be willing to pay to license its brand as if it did not own it. https://brandirectory.com/methodology)

https://brandirectory.com/methodology)
(2) A pioneering brand since 1889: not only was Michelin the first to design an inner tube for radial bicycle tires, it is also a pioneer in electrification (Formula E, MotoE).



Florent Menegaux, Michelin Group CEO



20**12** 

Michelin invents the first tire for the FormulaE electric single-seater championship.



2019

Michelin unveils Uptis, the airless tire.



Michelin introduces a new Pilot Sport tire designed and developed entirely virtually using Computer Aided Design (CAD).



20**23** 

Michelin unveiled a competition tire that incorporates 63% sustainable materials, equipping the GreenGT hydrogen prototype as well as the 100% electric Porsche GT4 ePerformance.

# **#WE RACE FOR CHANGE**



# COMPETITION, AN INNOVATION LABORATORY FOR MICHELIN

Over the decades, we have proudly demonstrated the performance of our competition tires. However the nature of motorsport has changed.

Today, the challenge is to develop «all-sustainable» tires for everyone, whose design and production have a limited impact on the planet's resources, biodiversity and CO<sub>2</sub> emissions, without compromising the performance that has made the Michelin brand so successful.

More than ever, the competition serves as a testing ground and accelerator technological innovation. The extreme conditions inherent to motorsport give us the opportunity to innovate, experiment in record time, learn, design new products and accelerate the development of sustainable solutions that benefit us all.



# SUSTAINABLE MATERIALS

Integrating sustainable materials into its tires is one of the major levers used by the Michelin Group to achieve its ambition of an «all-sustainable» tire by 2050, which will incorporate **100%** recycled or bio-sourced renewable materials.

### AT THE 2021 LE MANS 24 HOURS,

Michelin announced the introduction of 46% sustainable materials in the tires fitted to GreenGT's Mission H24 hydrogen-powered car. In 2022, this rate was increased to 53%, and Michelin announced that it would also equip the tire on the Porsche GT4 ePerformance, a future 100% electric racing car.

To mark the centenary of the 24 Hours of Le Mans, Michelin presented a «63%» version even more environmentally friendly.



# **MODELLING & SIMULATION**

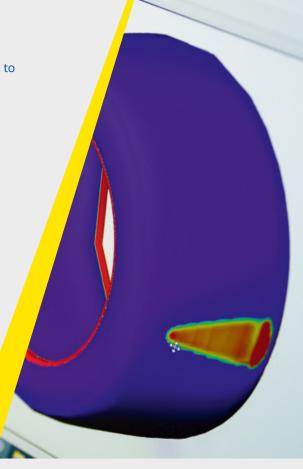
Michelin is working on simulation systems that enable the tires to be developed virtually.

Michelin Motorsport, a pioneer in this field, has put in place processes to extend these practices to road tires.

### THE NEW RANGES

developed for the Hypercar category were designed entirely on a simulator.

This innovation has drastically reduced the environmental impact of testing.



# ADLER STATE AND LESS OF THE PARTY OF THE PAR

# PERFORMANCE MADE TO LAST

Michelin is committed to providing safe, highperformance tires from the first to the last kilometer: in the race, to the finish line, or on the road, to the legal wear indicator.

As proof, over the last 10 years, Michelin has enabled LMP1 racing cars to cover up to 750 km at an average speed of 240 km/h on a single set of tires. That's the equivalent of two F1 Grand Prix races!

# REDUCING THE FREQUENCY OF REPLACEMENTS

means using and manufacturing fewer tires, reducing raw materials and energy, as well as the associated CO<sub>2</sub> emissions.

# MICHELIN MOTORSPORT RECORD'S





# FIA WORLD ENDURANCE CHAMPIONSHIP (WEC)

- 85 victories with 7 manufacturers
- 11 Constructor's titles, 11 Driver's titles
- 5 consecutive world titles with Toyota
- 151 LMGTE class wins (Pro and Am)

# **DAKAR RALLY**

- 19 victories in the Car category between 1981 and 2016
- 38 victories in the Motorcycle category between 1983 and 2023
- 33 Truck class wins between 1981 and 2017





# **FORMULA ONE** 1977-1984 AND 2001-2006

- 215 Grand Prix contested
- 102 victories
- 111 pole positions
- 6 Driver's titles
- 5 Constructor's titles

# PORSCHE SUPERCUP AND PORSCHE CARRERA CUP

- Partner of the Porsche Supercup since 2002
- Partner of 12 Porsche Carrera Cups around the world
- Supplier of slicks specially developed for the Porsche 911 GT3 Cup





# *24 HOURS OF LE MANS*

- 1st victory in 1923 for the 1st edition
- 32 victories, including 26 in a row since 1998
- 53 drivers and 11 brands have won with Michelin
- 92 podium finishes
- 117 category wins

# FIA WORLD CHAMPIONSHIP FORMULA E

- Founding partner of the championship in 2014
- 100 E-Prix victories
- 8 Driver's titles and 8 Team's titles





# FIA WORLD RALLY CHAMPIONSHIP (WRC)

- 1st Constructor's title with Alpine in 1973, the year the
- creation of the championship
- 58 world titles (28 Drivers and 30 Constructors)
- 347 victories with 17 brands and 111 drivers

# OTHER RECORDS, CUSTOMER RACING...

# EUROPEAN RALLY CHAMPIONSHIP FIA (ERC)

- More than 20 Driver's titles
- 2 wins in 2023 with Citroën and Skoda





# CHINA TOURING CAR COMPETITION (TCR)

- Michelin Official Tire Supplier since 2018
- All champion titles since 2018

# ASIAN LE MANS SERIES

- Partner since 2013, the year the championship
- 42 victories
- 10 Teams titles, 10 Drivers titles





# DTM

- Exclusive partner in 2021 and 2022
- Teams prestigious brands such as Audi, Mercedes, Mclaren, BMW, Lamborghini and Ferrari

PLUS A LONG LIST OF WINS ON ASPHALT AND GRAVEL RALLIES, NOTABLY IN EUROPE.





# IMSA WEATHERTECH **SPORTSCAR CHAMPIONSHIP**

- Partner since 2019, the year the championship was created
- 58 victories
- 5 Driver's, Team's and Manufacturer's titles

# 24 HOURS OF NÜRBURGRING

- 23 victories between 1992 and 2023
- 6 manufacturers have won with Michelin
- Michelin supports its manufacturer-partners in the NLS Championship held at the Nürburgring



# TECHNOLOGIES

# COMPOUND TECHNOLOGIES



Michelin's synthetic racing elastomers, used in rubber blends and combined with high-tech synthetic resins, ensure ultra-rapid start-up and rapid attainment of optimum operating temperature.



Improves grip in cooler temperatures and on wet without compromising tread life.



Rubber with a specific formulation providing grip and consistency in all dry conditions, offering a wide operating window.



Designed to improve endurance and longevity on the track. Wear is slower on the outer shoulder due to reinforcement.



The rubber compound is derived from the WRC competition tire, providing improved wear resistance in off-road conditions.



### NEW

A new tread compound inspired by our confidential WEC tire offers dynamic driving, handling and consistent performance.

# TREAD TECHNOLOGIES



The tread is specially optimized to allow a large number of studs to be placed in the center and on the shoulders of the tire.

Swedish studding: 20 studs per linear decimeter, e.g. 15/65-15 MICHELIN X-ICE NORTH, 384 studs per tire, 7 mm protrusion\*. Monte Carlo studding: 10 studs per linear decimeter, e.g. 18/65-18 MICHELIN PILOT ALPIN NA01, 200 studs per tire, protrusion\* 1.5 mm.

\*protrusion: length of studs protruding from the tire. The longer the studs protrudes, the better it bite the ice. However, this also increases the risk of tearing or breaking the studs. or breaking it.



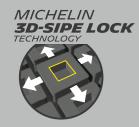
Indicator on the tread, designed to help control wear and optimize the tire's longevity potential.



The inside and outside of the tire have a different tread pattern (grooves, void ratio...) to provide maximum grip in very different and variable conditions (wet, damp, dry, even muddy in certain situations).



L-shaped tread blocks increase the tire's resistance to abrasion. Tread blocks increase the tire's resistance to and improve driving precision.



Self-locking sipes provide hundreds of biting edges to optimize grip without sacrificing tread block stability.

# • TREAD PATTERN TECHNOLOGIES



The tread, with its deep grooves, ensure grip and traction on very cold and snow-covered roads



The tread is specifically developed to break up the water film and prevent aquaplaning. The evacuation grooves are reinforced with deep transverse sipes to break up the film of water.



Directional tires, left and right, for optimum performance on all types of terrain. The tread is oriented towards effort, especially in bends, to guarantee grip and traction.



The patented S-shaped lamellae give the tread blocks mobility to follow ground irregularities, while increasing ground irregularities, while increasing the number of edges to ensure constant grip.

# • CASING ARCHITECTURE TECHNOLOGIES



A hybrid web of aramid and nylon ensures optimal transmission of instructions on the track.



The Contact Patch 3.0 distributes pressure evenly the entire contact patch during cornering, for greater grip and control, and longer-lasting tires.



The sidewall is equipped with 2 aramid textile shields to protect the tire from lateral while remaining light and flexible.

# • SERVICES & SOLUTIONS TECHNOLOGIES



The RFID (Radio Frequency IDentification) chip is a wireless electronic component that enables unique, standard identification.



The tire is fitted with a patch for a TMS (Tyre Management System) sensor which, once connected and programmed, it can transmit information about the tire to the car, thanks to a Bluetooth Low Energy (BLE) connection.

# RANGE RECAP

MICHELIN PILOT SPORT A  MICHELIN PILOT SPORT A  MICHELIN PILOT SPORT R  MICHELIN PILOT SPORT CUP  MICHELIN PILOT SPORT M			NG	COMPOUND TECHNOLOGIES						
MICHELIN PILOT SPORT A  MICHELIN PILOT SPORT R  MICHELIN PILOT SPORT CAMEE  MICHELIN PILOT SPORT CAMEE  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  MICHELIN PILOT SPORT CUP  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  MICHELIN PILOT SPORT M			RECUTTING	MICHELIN WARM-UP TECHNOLOGY	SILICA	ADAPTIVE	MICHELIN TRACK LONGEVITY 2,0 TECHNOLOGY	RALLY FORCE	WEC	MAX
MICHELIN PILOT SPORT CUP T  MI			•	•			i 			
MICHELIN PILOT SPORT GRAVEL  MICHELIN LTX FORCE T & FORCE T XL  MICHELIN PILOT SPORT CUP OT  MICHELIN PILOT SPORT CUP OT  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT  P2L  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  M3 & N3R  MICHELIN PILOT SPORT M		MICHELIN PILOT SPORT A	•	•		1 1 1 1 1 1	 		 	
MICHELIN PILOT SPORT GRAVEL  MICHELIN LTX FORCE T & FORCE T XL  MICHELIN PILOT SPORT CUP OT  MICHELIN PILOT SPORT CUP OT  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT  P2L  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  M3 & N3R  MICHELIN PILOT SPORT M	halt :e			•			 			
MICHELIN PILOT SPORT GRAVEL  MICHELIN LTX FORCE T & FORCE T XL  MICHELIN PILOT SPORT CUP OT  MICHELIN PILOT SPORT CUP OT  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT  P2L  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  M3 & N3R  MICHELIN PILOT SPORT M	/ Asp ow, I	MICHELIN PILOT SPORT R	•				 			
NAO1 & NAO1 CL MICHELIN X-ICE NORTH NAO1  MICHELIN PILOT SPORT CENAMEL  MICHELIN PILOT SPORT H S S C +  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT M  MICHELIN PILOT SPORT GT M  MICHELIN PILOT SPORT GT D  MICHELIN PILOT SPORT CUP NS & NSR  MICHELIN PILOT SPORT CUP NS & NSR  MICHELIN PILOT SPORT M  MICHELIN PILOT SPORT M  MICHELIN PILOT SPORT M	Rally Sn						 			
MICHELIN PILOT SPORT GT  MICHELIN PILOT SPORT CUP  N3 & N3R  MICHELIN PILOT SPORT CUP  N2 & N2R  MICHELIN PILOT SPORT M						1	1 1 1 1 1 1			•
MICHELIN PILOT SPORT CUP TO MICHELIN PILOT SPORT GT P2L MICHELIN PILOT SPORT CUP TO MICHELIN PILOT SPORT GT P2L MICHELIN PILOT SPORT GT P2H MICHELIN PILOT SPORT GT P2H MICHELIN PILOT SPORT GT MATCHELIN PILOT SPORT GT MATCHELIN PILOT SPORT GT MATCHELIN PILOT SPORT GT MATCHELIN PILOT SPORT CUP MATCHELIN PILOT SPORT										
MICHELIN PILOT SPORT CUP TO MICHELIN PILOT SPORT GT P2L MICHELIN PILOT SPORT CUP TO MICHELIN PILOT SPORT GT P2L MICHELIN PILOT SPORT GT P2H MICHELIN PILOT SPORT GT P2H MICHELIN PILOT SPORT GT MATCHELIN PILOT SPORT GT MATCHELIN PILOT SPORT GT MATCHELIN PILOT SPORT GT MATCHELIN PILOT SPORT CUP MATCHELIN PILOT SPORT	lly vel	MICHELIN PILOT SPORT GRAVEL	•	•			 	•		
MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT M  MICHELIN PILOT SPORT GT M+  MICHELIN PILOT SPORT GT L  MICHELIN PILOT SPORT GT P2L  MICHELIN PILOT SPORT GT P2H  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M	Ra		•				 	•		
MICHELIN PILOT SPORT CUP T  MICHELIN PILOT SPORT GT M  MICHELIN PILOT SPORT GT M+  MICHELIN PILOT SPORT GT L  MICHELIN PILOT SPORT GT P2L  MICHELIN PILOT SPORT GT P2H  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M	Hii			•		 	 		 	
MICHELIN PILOT SPORT GT M  MICHELIN PILOT SPORT GT M+  MICHELIN PILOT SPORT GT L  MICHELIN PILOT SPORT GT P2L  MICHELIN PILOT SPORT GT P2H  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M		MICHELIN PILOT SPORT CUP <sup>GT</sup>		•		•	 			
MICHELIN PILOT SPORT GT L  MICHELIN PILOT SPORT GT P2L  MICHELIN PILOT SPORT GT P2H  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & NICHELIN PILOT SPORT M		MICHELIN PILOT SPORT CUP $^{ au}$		•		1 1 1 1 1 1	•		 	
MICHELIN PILOT SPORT GT L  MICHELIN PILOT SPORT GT P2L  MICHELIN PILOT SPORT GT P2H  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M	٠.						•			
MICHELIN PILOT SPORT GT L  MICHELIN PILOT SPORT GT P2L  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M							•			
MICHELIN PILOT SPORT GT P2H  MICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M	0	MICHELIN PILOT SPORT GT L					1 			
P2H  WICHELIN PILOT SPORT CUP N3 & N3R  MICHELIN PORSCHE CUP N2 & N2R  MICHELIN PILOT SPORT M							1 1 1 1 1 1 1			
MICHELIN PILOT SPORT M							1 1 1 1 1 1			
MICHELIN PILOT SPORT M	che					•	•			
	Pors Cu					•				
MICHELIN PILOT SPORT M P512	e-				•					
	Singl	MICHELIN PILOT SPORT M P512					1 1 1 1 1 1 1			

	TREAD TECHNOLOGIES							CASING TECHNOLOGIES			SERVICES & SOLUTIONS		
Í	MICHELIN WEAR 2 CHECK TECHNOLOGY	MICHELIN DUAL SPORT TREAD DESIGN	MICHELIN L-GRIP BLOCK TECHNOLOGY	MICHELIN 3D-SIPE LOCK TECHNOLOGY	MICHELIN COLD DESIGN	MICHELIN WATER BRAKE TECHNOLOGY	MICHELIN RIGHT/ LEFT DESIGN	MICHELIN S-SIPE TECHNOLOGY	MICHELIN DYNAMIC RESPONSE TECHNOLOGY	MICHELIN CONTACT PATCH 3.0	MICHELIN SIDE SHIELD TECHNOLOGY	MICHELIN RFID TECHNOLOGY	MICHELIN CONNECTED TECHNOLOGY
	•	•							•			•	•
	•	•							•			•	•
	•	•							•				
		•										•	
					•							•	
							•					•	
			•				•	•			•	•	
			•	•								•	
									•			•	
				 				 	•			•	
						•							
												•	
										•			

# VIDEOS « MICHELIN MOTORSPORT GARAGE »





How to choose the rally tires best suited to your needs



Rally tires: learn all about tire pressure thanks to our experts



Successfully recut an asphalt rally tire



Successfully recut a gravel rally tire



Choosing the right rubber compound for an asphalt rally tire



Understanding wear on a slick tire



Choosing the right rubber compound for a slick tire



Understanding temperature increase on a slick tire

# SERVICES & SOLUTIONS

- 22 MICHELIN TIRE SIMULATION
- 24 MICHELIN TRACK CONNECT
- 25 MICHELIN RFID READER









# MICHELIN'S NUMERIC MODELING OFFER TO HELP YOU OPTIMIZE YOUR TIRE KNOWLEDGE AND BETTER OPERATE YOUR VEHICLE

### **OFFER AVAILABLE FOR THE FOLLOWING RANGES:**

MICHELIN
PILOT SPORT GT M
(S8 & S9 compounds)

**MICHELIN**PILOT SPORT CUP GT

**MICHELIN**PILOT SPORT PRO CT

30/68-18 31/71-18







# • REAL-GROUND MEASUREMENT, REPRESENTATIVE OF TIRE PERFORMANCE ON THE TRACK

### CORRELATED WITH TRACK DATAS

	MICHELIN DATA PACKAGE	MICHELIN TIRE SIMULATION
	Tire physical caracteristics	Tire model for magic formula
Useful information for vehicle setup with data on ride height, aerodynamics, mechanical balance, vertical rigidity, loaded radius and rolling radius.		
Longitudinal and lateral grip	_	•
Cornering stiffness	_	•
Self-aligning torque	_	•
Laptimer integration	_	•
Usable in your simulator (DIL : Driver In the Loop)	_	

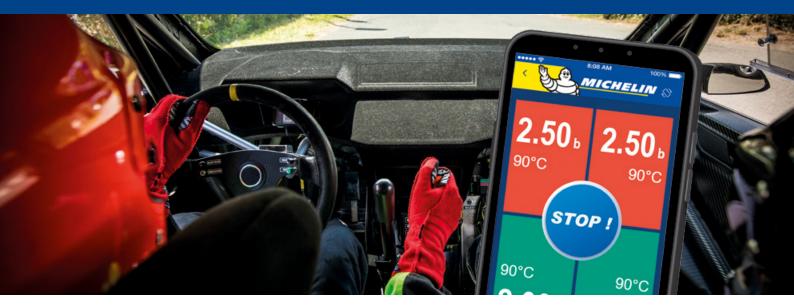


**FOR FURTHER INFORMATION,**PLEASE CONTACT YOUR USUAL
MICHELIN MOTORSPORT EXPERT

# MICHELIN TRACK CONNECT

### **MOTORSPORT MODE**

Developed by Michelin Motorsport teams and co-developed with rally drivers and co-drivers, the Michelin Track Connect application has been designed to make the most of the potential of rally tires thanks to the Motorsport mode.



# **BOOST YOUR PERFORMANCE!**

- Recommended tire pressure according to vehicle, use, compounds and driving conditions,
- Be warned of a puncture with an on-screen alert,
- View tire pressure and temperature in real time,
- Analyse the data recorded during the journey to adapt pressures for the next stage.



# **WEB PORTAL**MICHELIN TRACK CONNECT

Reserved for MICHELIN users, Track Connect Motorsport mode, the portal that allows you to easily analyse all of the recorded data and to share it. It grants access to exclusive content pertaining to tires: videos, technical data files, personalised advice, etc



portal.trackconnect. michelin.com

### WHERE CAN I DOWNLOAD THE MICHELIN TRACK CONNECT APP?





The car must be configured with the MICHELIN Track Connect Motorsport kit.

# MICHELIN RFID READER

The MICHELIN RFID READER is a system that allows for an automatic and dynamic reading of FIA barcodes. This system ensures regulations are adhered to by competitors while reducing administration and workload on the staff appointed to monitor the eligibility of tires.



# **HOW DOES IT WORK?**



The system uses an RFID TAG placed in the tire during the manufacturing process. The tag is encoded at the factory and contains the unique data that allows each tire to be identified remotely.

### TWO READING MODES:

- Static reading using an RFID terminal
- Dynamic reading up to 60 km/h by a terminal placed in the pitlane (circuit) or the service

### BENEFITS OF THE MICHELIN RFID READER

- Removes the problem of illegible FIA labels thanks to an RFID chip placed in the tire and the automatic reading,
- Instant TAG reading,
- Prevents any chance of cheating because of the RFID TAG is locked at the factory,
- Automates controls and reduces the number of technical officials.

# RALLY

- 28 ADVICE AND PRESSURES
- 30 RECUTTING

# **36 - ASPHALT & SNOW RALLY**

- 36 TECHNICAL TABLE
- 38 MICHELIN PILOT SPORT PRO RALLY S10, M20, H30
- 40 MICHELIN PILOT SPORT A SS02, S10, M20, H31
- 42 MICHELIN PILOT SPORT A MW1
- 44 MICHELIN PILOT SPORT R P01, 11, 21, 31
- 45 MICHELIN PILOT SPORT R «VERSION GT» P01, 11, 21, 32
- 46 MICHELIN PILOT ALPIN NA01 NA01CL

# 48 - ICE RALLY

49 - MICHELIN X-ICE NORTH NA01

### **50 - GRAVEL RALLY**

- 50 MICHELIN PILOT SPORT GRAVEL G70, G80, G91
- 54 MICHELIN LTX FORCE T 71, 81, 91
- 55 MICHELIN LTX FORCE T XL 72, 82, 92

56 - TECHNICAL DATA





# ADVICE AND PRESSURES

Data provided for informational purposes and may vary depending on actual conditions of use. In the event of use outside of normal conditions of use, these recommendations must be adapted. Consult a professional

A distinction is made between cold and hot pressures.

### **COLD PRESSURE**

varies according to the air/ground temperature and the length of the special stage.

### **HOT PRESSURE**

corresponds to the value measured at the end of the special stage.

Conditions Step	Ö: • DRY/DAMP TARMAC	WET TARMAC	Ö. • DRY/WET <b>GRAVEL</b>	MUD GRAVEL	∰ SNOW & ICE	
T TYRE FITTING TENT	<b>2,2</b> bar	<b>2,2</b> bar	<b>2,2</b> bar	<b>2,5</b> bar	<b>2,0</b> bar	
2 SERVICE PARK	<b>1,8</b> bar	<b>2,0</b> bar	<b>1,8</b> bar	<b>2,2</b> bar	<b>1,8</b> bar	
STAGE START	<b>1,65</b> bar	1,8 bar <i>Slick</i> 2 bar <i>MW1</i>	<b>1,7</b> bar	<b>2,2</b> bar	<b>1,5</b> bar	
4 STAGE END	<b>MAX 2,3</b> bar	MAX 2,5 bar	<b>MAX 2,3</b> bar	<b>MAX 2,6</b> bar	<b>MAX 2,0</b> bar	
5  FOLLOWING STAGE START	MAX -200g drop	MAX -200g drop	MAX -200g drop	MAX -200g drop	MAX -200g drop	

- If the pressure is too low, carcass movement is generated, degrading precision.
- Too high a pressure at the end of a special run leads to understeer and accelerates degradation.
- In the event of rain, increasing the pressure allows water to evacuate better without overheating the tire.







# RECUTTING MAKES IT POSSIBLE TO:

- Improve the grip when adhesion to the road worsens following changing weather conditions,
- to increase the tyre's initial intrinsic water evacuation characteristics,
- to offer the driver a tailor-made feel adapted to each special stage.

For asphalt tires, fit your reshaper with a new W3 blade

For gravel tires, fit your resharpening machine with a new W3 or W4 blade

Grooving a tire's tread pattern modifies its characteristics and performance. It is an operation that requires the use of bespoke equipment and tools in compliance with instructions.

Before adding grooves to a tire's tread pattern, first practice on an old tire to evaluate groove-depth and prevent possible damage to the casing plies situated beneath the rubber compound

# MICHELIN PILOT SPORT R

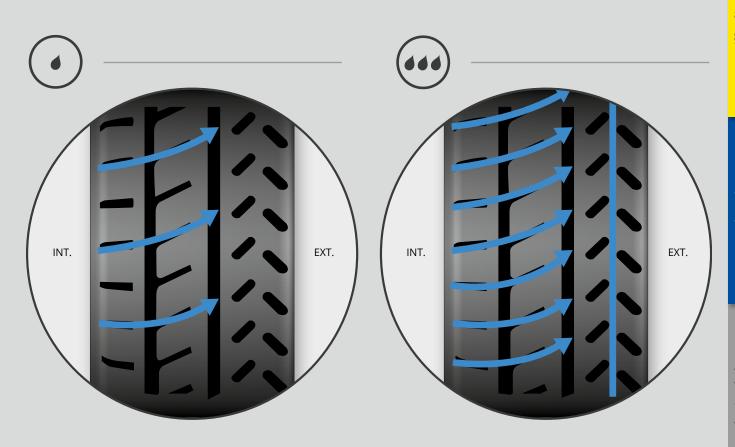




### RECUTTING PLAN

Two grooving patterns, depending on the amount of surface-water to be cleared

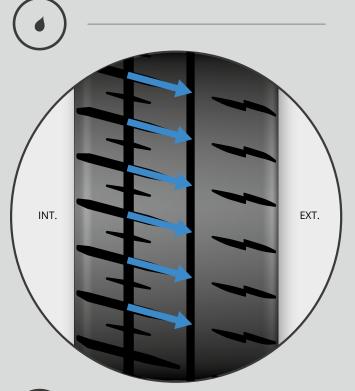
W3 - 11 MM

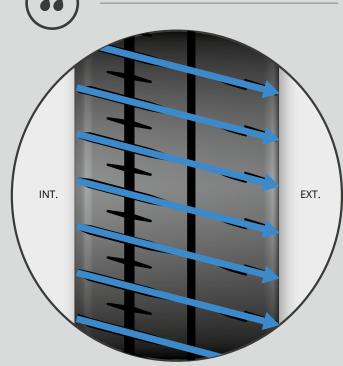


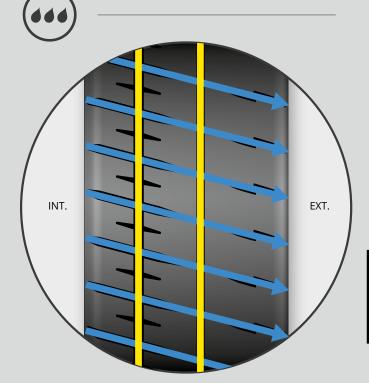
# **MICHELIN**PILOT SPORT A











### **RECUTTING PLAN**

Three grooving patterns, depending on the amount of surface-water to be cleared

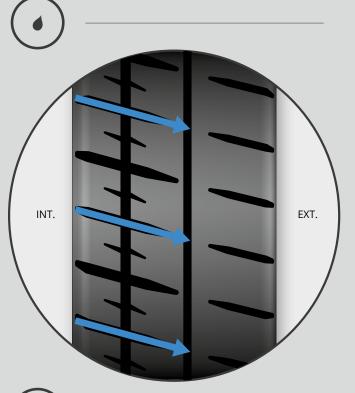


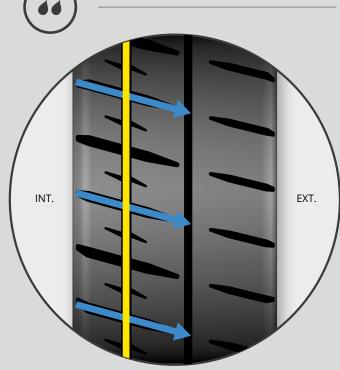
Did you know?
With SS02 or S10 rubber, the MICHELIN
Pilot Sport A offers remarkable qualities
in the wet, this re-cutting plan will give
you will enable you to obtain a similar
evacuation MW1 in the event of a sudden
meteorological sudden weather conditions

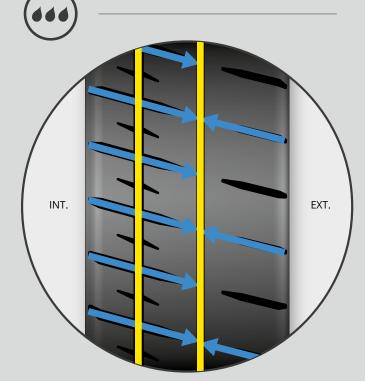












### RECUTTING PLAN

Three grooving patterns, depending on the amount of surface-water to be cleared



Did you know?
With its S10 rubber compound, the MICHELIN
Pilot Sport Pro Rally remarkable qualities in
the wet, this re-cutting plan will enable you
to achieve evacuation similar to MW1 in the
event of sudden weather conditions.



# MICHELIN PILOT SPORT GRAVEL





### **RECUTTING PLAN**

Two grooving patterns, depending on the amount of surface-water to be cleared

# W3/W4 - 11 MM

The MICHELIN Pilot Sport Gravel has been developed with a higher than the MICHELIN Latitude Cross. Therefore does not require re-cutting.

require re-cutting.

However, in exceptionally muddy situations or in the case of a first-position start on gravel, our technicians recommend the following cuts:



# MUD

# 

# LOOSE GRAVEL



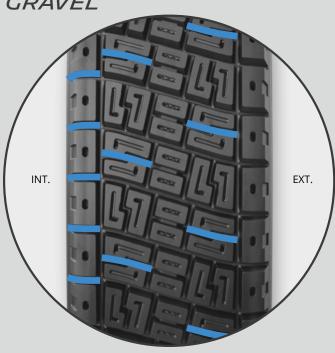
# MICHELIN LTX FORCE T & LTX FORCE T XL





W3/W4 - 11 MM

# LOOSE GRAVEL



# ASPHALT & SNOW RALLY

		DIAM.	COMPOUND	SURFACE
				CLOASED FLOOR MEDIUM OPEN FLOOR
	<i>510</i>	16′ 17′	SOFT	
MICHELIN PILOT SPORT PRO RALLY	M20	16′ 17′	MEDIUM	
PRO	H30	16′ 17′	HARD	
	11	15′ 16′ 17′	SOFT	
<b>MICHELIN</b> PILOT SPORT R	21	15′ 16′ 17′	MEDIUM	
	<i>3</i> 1	15′ 16′ 17′	HARD	
	11	18′	SOFT	
MICHELIN	21	18′	MEDIUM	
PILOT SPORT R VERSION GT	<i>32</i>	18′	HARD	
	P01	18′	RAIN	
	<i>SS02</i>	18′	SUPER SOFT	
	<i>S10</i>	18′	SOFT	
<b>MICHELIN</b> PILOT SPORT A	M20	18′	MEDIUM	
	H31	18′	HARD	
	MW1	15′ 16′ 17′ 18′	RAIN	
MICHELIN	NAO1	15′ 16′ 17′ 18′	SNOW	
PILOT ALPIN	NAO1CL	15′ 16′ 17′ 18′	STUDDED SNOW	



		GROUND TEMPERATURE (°C)												
DRY	DAMP	WET	FROSTY	SNOW	ICE	-5	0	5	10	15	20	<i>25</i>	<i>30</i>	<b>35</b> +
			///////////////////////////////////////											
			///////////////////////////////////////				//////							
	///////////////////////////////////////													
												,,,,,,		



## MICHELIN PILOT SPORT PRO RALLY

# RECUTTING PILOT SPORT

## ATTACK WITH CONFIDENCE WITH THE MICHELIN PILOT SPORT PRO RALLY



### **CONFIDENCE ON ALL TYPES** ASPHALT

Thanks to the development of a new type of rubber that quickly reaches the right operating temperature and a unique tread pattern, the tire can be adapted to all types of road conditions. With a unique tread pattern, the tire adapts to all types of surfaces to give you even more grip.



### IMMEDIATE CONFIDENCE

Featuring an innovative architecture, the tire is responsive in the braking phase, and provides consistent lateral grip.



### **MAXIMIZE YOUR PERFORMANCE**

Follow the recommendations of the MICHELIN application Track Connect app to adapt your tire pressures and optimize the use of your tires.

ROAD-APPROVED **IN EUROPE ONLY** 

























DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE	
	19/60 - 16	S10	495780	$\checkmark$	$\checkmark$	**
	19/60 - 16	S10	251133		$\checkmark$	*
16'	19/60 - 16	M20	241151	$\checkmark$	$\checkmark$	*+
10	19/60 - 16	M20	920948		$\checkmark$	*
	19/60 - 16	H30	131694	$\checkmark$	$\checkmark$	**
	19/60 - 16	H30	142575		$\checkmark$	*

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE	
	19/63 - 17	S10	878932	$\checkmark$	$\checkmark$	**
	19/63 - 17	S10	340435		√	*
17'	19/63 - 17	M20	927224	$\checkmark$	$\checkmark$	**
17	19/63 - 17	M20	866846		√	*
	19/63 - 17	H30	481031	$\checkmark$	√	**
	19/63 - 17	H30	401133		√	*

	COMPOUND	SURFACE			CONDITIONS					GROUND TEMPERATURE (°						c)			
		CLOASED FLOOR	МЕВІИМ	OPEN FLOOR	DRY	DAMP	WET	FROSTY	SNOW	ICE	-5	0	5	10	15	20	25	<i>30</i>	<i>3</i> 5+
				////////	W/////		//////	V///											
510	SOFT																		
M20	MEDIUM																		
H30	HARD																		

(1) Notch volume rate \* While stocks last \*\* Launch in 2024



## **MICHELIN** WARM-UP TECHNOLOGY

MICHELIN racing elastomers, used in rubber compounds and combined with high-tech synthetic resins, enable ultrafast warm up to reach the optimum temperature.

## **MICHELIN DUAL SPORT** TREAD DESIGN

The inner and outer have a different tread pattern (grooves, void ratio....) to provide maximum grip in very different and variable conditions (wet, damp, dry, even muddy in certain situations).





· If points **1**, **2**, **3** are visible, wear is estimated at < **25%**.

· If points **2** and **3** are visible, wear is estimated between **25%** and **50%**.

· If only point **3** is visible, wear is estimated between **50%** and **75%**.

· If no point is any longer visible, wear is estimated between **75%** and **100%**.

## MICHELIN DYNAMIC RESPONSE

TECHNOLOGY

A hybrid fabric made aramid and nylon, ensures optimum transmission of instructions on the track.

## MICHELIN PILOT SPORT A SS02, S10, M20, H31



## SAVE UP TO 0.7 SECONDS PER KILOMETER (1)



### ALMOST INSTANTANEOUS WARM UP

The tread is made of a new type of rubber that allows rapid warm up, enabling it to reach the right operating temperature more quickly.



### PRECISE, IMMEDIATE FEEDBACK

Thanks to a reinforced carcass, the tire provides better lateral and braking support than its predecessor, the MICHELIN Pilot Sport R. It therefore reacts quickly to driving instructions.



## LONGER LIFE

Up to 30%  $^{(2)}$  longer service life than the equivalent compound in MICHELIN Pilot Sport R, thanks to a new tread compound and tread pattern that evenly distribute the effects of mechanical stress across the entire tread surface.



### **LONGITUDINAL GRIP**

The innovative tread pattern provides traction on polluted roads and improves braking performance.



IN EUROPE ONLY

























DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE
	20/65 - 18	SS02	734141	$\checkmark$	$\checkmark$
18'	20/65 - 18	SS02	345599	$\checkmark$	
10	20/65 - 18	S10	887143	$\checkmark$	$\checkmark$
	20/65 - 18	S10	648588	$\checkmark$	

DIAMETEK / DIAMÈTRE	DIMENSIONS	CRAN	CAI	RFID	CONNECTABLE
	20/65 - 18	M20	362669	√	√
18'	20/65 - 18	M20	597891	$\checkmark$	
10	20/65 - 18	H31	536750	$\checkmark$	$\checkmark$
	20/65 - 18	H31	753779	√	

(1) 0.73 s/km faster with the MICHELIN Pilot Sport A S10 than with the MICHELIN Pilot Sport R 11, in wet/dry conditions. Internal studies carried out in February 2020 in France on Skoda R5 and November 2019 in Spain on Citroen R5.
(2) In-house study carried out in May 2020 in France on Skoda R5.

COMPOUND **SURFACE** CONDITIONS GROUND TEMPERATURE (°C) FROSTY OPEN FLOOR DAMP DRY ζE 5 10 15 20 25 30 35+ SUPER SOFT **SS02** SOFT 510 M20 MEDIUM H31 HARD



## MICHELIN PILOT SPORT A MW1



## GRIP FOR WET AND DRY **ROADS**



### **WET AND DRY GRIP**

Specially designed for driving in the rain and on dry roads. The MICHELIN Pilot Sport A MW1 has a tread depth<sup>(1)</sup> twice that of the the MICHELIN Pilot Sport R P01 for excellent water evacuation. The transverse grooves also enable it to find traction in the event of changes in grip (polluted roads, mud, gravel...).



### SETTING UP

Thanks to the "lightning bolt" tread pattern, which heats up the rubber and carcass, the MICHELIN Pilot Sport A MW1 guarantees a rapid start-up.



### PRECISE, IMMEDIATE FEEDBACK

Thanks to its reinforced carcass, the MICHELIN Pilot Sport A MW1 guarantees excellent lateral and braking support. The tire reacts quickly to driving instructions.

> **ROAD-APPROVED** IN EUROPE ONLY



Technologies:









MICHELIN DYNAMIC RESPONSE



MICHELIN RFID TECHNOLOGY





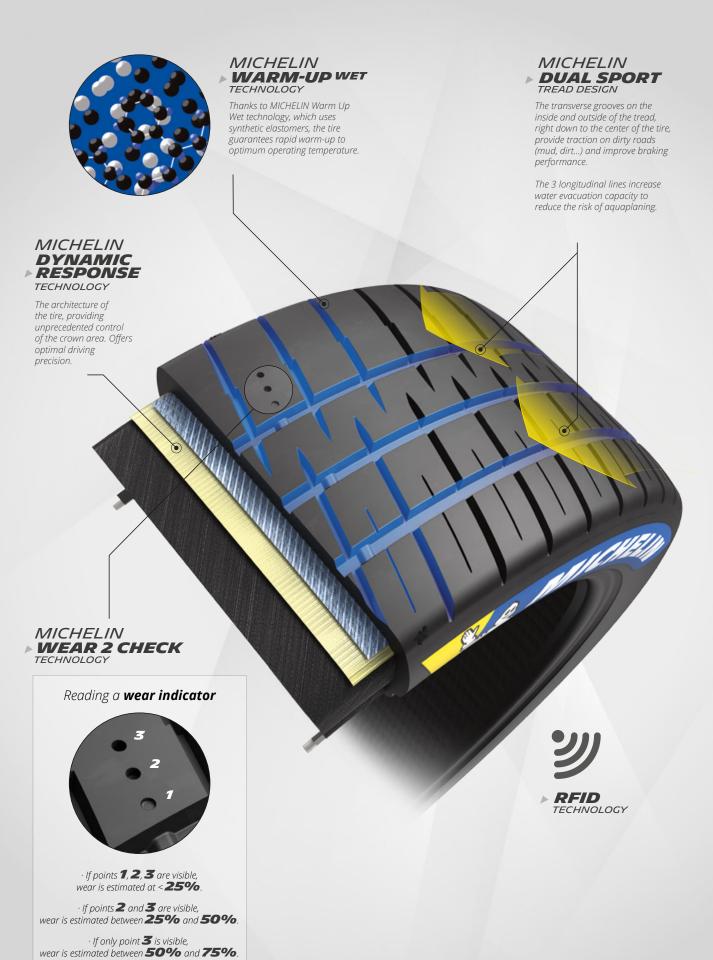
DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE
15'	19/58 - 15	MW1	200950	$\checkmark$	
16′	19/60 - 16	MW1	374809	$\checkmark$	√
10	19/60 - 16	MW1	579838	$\checkmark$	

DIAMETER / DIAMÈTRE	DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE
17'	19/63 - 17	MW1	536354	$\checkmark$	√
17	19/63 - 17	MW1	521413	$\checkmark$	
18'	20/65 - 18	MW1	542571	$\checkmark$	√
10	20/65 - 18	MW1	987825	√	

(1) Volume entailment rate

	COMPOUND	SURFACE				CONDITIONS					GROUND TEMPERATURE (°C)							PC)	
		CLOASED FLOOR	МЕВІИМ	OPEN FLOOR	DRY	DAMP	WET	FROSTY	MONS	ICE	-5	0	5	10	15	20	25	30	<b>3</b> 5+
MW1	RAIN																		

· If no point is any longer visible, wear is estimated between **75%** and **100%**.



## MICHELIN PILOT SPORT R



## **MULTIPLE CHAMPIONS** ON NATIONAL AND REGIONAL RALLIES



### GRIP

Consisting of two longitudinal lines in the shape of asymmetrical V lines, the MICHELIN Pilot Sport R provides excellent grip on dry surfaces. The width of the groove allows water to be evacuated on wet surfaces.



## PERFORMANCE CONSISTENCY

Its architecture has been specifically developed to guarantee consistent performance whatever the duration of the specials.



## APPROVED FOR ROAD USE IN EUROPE ONLY

MICHELIN DUAL SPORT TREAD DESIGN





DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE
	19/58 - 15	11	375228		
15'	19/58 - 15	21	730497		
	19/58 - 15	31	374784		
	19/60 - 16	P01	408827	$\checkmark$	
	19/60 - 16	11	907368	$\checkmark$	√
	19/60 - 16	11	390386	$\checkmark$	
16′	19/60 - 16	21	925134	$\checkmark$	√
	19/60 - 16	21	418826	$\checkmark$	
	19/60 - 16	31	303224	$\checkmark$	√
	19/60 - 16	31	797871	$\checkmark$	

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE
	19/63 - 17	11	652723	$\checkmark$	√
	19/63 - 17	11	574904	$\checkmark$	
	19/63 - 17	21	149918	$\checkmark$	√
17'	19/63 - 17	21	121070	$\checkmark$	
	19/63 - 17	31	344868	$\checkmark$	
	20/63 - 17	11	489529		
	20/63 - 17	21	309188		

	COMPOUND	SURFACE			CONDITIONS					GROUND TEMPERATURE (°C						C)			
		CLOASED FLOOR	МЕDIUМ	OPEN FLOOR	DRY	DAMP	WET	FROSTY	NONS	ICE	-5	0	5	10	15	20	25	<i>30</i>	<b>3</b> 5+
				<i>(((((((((((((((((((((((((((((((((((((</i>	V//////			////											
11	SOFT																		
21	MEDIUM																		
31	HARD																		

## MICHELIN PILOT SPORT R **VERSION GT**



## THE MICHELIN RALLY TIRE **FOR GT CARS**

## Grip

### GRIP

Thanks to a tread pattern derived from the WRC asphalt, consisting of three asymmetrical V-shaped longitudinal lines, grip is constant regardless of grip changes. The tire also guarantees excellent cornering grip.



## CONSISTENT PERFORMANCE

Its architecture, specifically developed for GT vehicles guarantees consistent performance on different types of special stages.

## Ø 18;"

**∆** UNAPPROVED ROAD



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
	24/65 - 18	P01	456226
	24/65 - 18	11	091227
18′	24/65 - 18	21	889408
10	29/65 - 18	P01	331637
	29/65 - 18	21	018333
	29/65 - 18	32	900255

	COMPOUND		SURFACE			c	OND	ΙΤΙΟΙ	v <i>s</i>		GROUND TEMPERATURE (°C)								
		CLOASED FLOOR	МЕВІИМ	OPEN FLOOR	DRY	DAMP	WET	FROSTY	MONS	ICE	-5	0	5	10	15	20	25	30	<b>3</b> 5+
11	SOFT										Г								
21	MEDIUM																		
32	HARD																		
P01	RAIN																		



## MICHELIN PILOT ALPIN NA01 & NA01 CL

## MULTIPLE MONTE CARLO RALLY WINS



## GRIP ON WET AND SNOW-COVERED TRACKS

Guarantees optimum grip on wet, snowy and icy roads, thanks to an architecture that optimizes the ground contact area.



## STUDDED VERSION

The studded version complies with "Monte Carlo" rally regulations, allowing use in snow/ice conditions.



Technologies:







DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
15'	16/61 - 15	NA01 CL	986365	
	16/61 - 16	NA01	460943	
16'	16/61 - 16	NA01 CL	766332	
	16/61 - 17	NA01	505213	
17'	16/61 - 17	NA01 CL	782532	
	18/65 - 18	NA01	739500	√
18'	18/65 - 18	NA01 CL	014478	√

## MONTE CARLO STUDDED

10 studs per linear decimeter, e.g. 18/65-15 MICHELIN PILOT ALPIN NA00, 200 studs per tire, protrusion\* 2 mm



\*Protrusion: length of stud protruding from the tire. The longer the stud protrudes, the better it bites the ice. However, this also increases the risk of tearing or breaking the stud.

	COMPOUND	5	SURFACE			c	OND	ΙΤΙΟΙ	V <i>S</i>		G	GROUND TEMPERATURE (°C)							
		CLOASED FLOOR	МЕВІИМ	OPEN FLOOR	DRY	DAMP	WET	FROSTY	NONS	ICE	-5	0	5	10	15	20	25	<i>30</i>	<b>35</b> +
NA01	SNOW				г						Г								
NA01CL	STUDDED SNOW																		





## **MICHELIN**X-ICE NORTH NA01

## **EXTREME GRIP**FOR ICE RALLY STAGES

## Grip

### GRIP ON FROZEN SURFACES

Thanks to a tear-resistant stud profile and a tread pattern designed for use on ice, the tire provides maximum grip in straight lines and bends.

## 13/64-15 15/65-15 L SANICHELIN SANICHELIN

## **CORNERING STABILITY**

The casing is designed to provide excellent lateral support on snowy and icy trails.



Technologies:



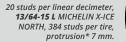








## STUDDED SUEDE-TYPE







20 studs per decimeter linear, **15/65-15 L** MICHELIN X-ICE NORTH, 384 studs per tire, 7 mm protrusion\*.

\*Protrusion: length of stud protruding from the tire. The longer the stud protrudes, the better it bites the ice.

However, this also increases the risk of tearing or breaking the stud.

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	TYPE	COMPOUND / CRAN	CAI	RFID
	13/64 - 15	NA01	STUDDED ICE	419700	
15′	15/65 - 15	NA01 L	STUDDED ICE	958109	√
	15/65 - 15	NA01 R	STUDDED ICE	043907	√

L = Left (gauche) R = Right (droite)

## **GRAVEL** RALLY

		DIM.	COMPOUND	SURI	FACE	
				ROLLING	BRITTLE	
	G70		SOFT			
<b>MICHELIN</b> PILOT SPORT <sup>GRAVEL</sup>	G80	17/65 - 15	MEDIUM			
	G91		HARD			
	72		SOFT			
<b>MICHELIN</b> LTX FORCE T XL	82	16/64 - 15 17/65 - 15	MEDIUM			
	92		HARD			
	71	14/62 - 15	SOFT			
<b>MICHELIN</b> LTX FORCE T	81	16/64 - 15* 17/65 - 15*	MEDIUM			
	91	,55 13	HARD			

\* while stocks last



	POLLUTION	1		CONDITIONS	
POLLU	TED SOIL	CLEAN SOIL	MUD	DAMP	DRY
	<i>'/////</i>				
	<i></i>		'//////////////////////////////////////		
	<b>/////</b>		<i>'\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>		
			<i>'////////////////////////////////////</i>		



## MICHELIN PILOT SPORT GRAVEL



## THE COMBINATION OF **RESISTANCE AND PERFORMANCE** FOR GRAVEL RALLY STAGES



## **MULTI-PURPOSE USE**

The tire's sidewall is equipped with 2 aramid textile shields that protect it from lateral aggression while remaining flexible yet robust, ensuring performance on rolling and brittle surfaces.



## **CONSTANT GRIP**

Patented S-sipes give mobility to follow ground irregularities, while increasing the number of edges to ensure consistent grip.



## **WEAR RESISTANCE**

The tread compound and design of the tread allow heat to be dissipated which increases the tire's resistance to wear.







Technologies:

















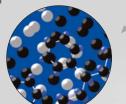




DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
	17/65 - 15	G70 L	333947	√
15′	17/65 - 15	G70 R	125894	√
	17/65 - 15	G80 L	796201	√

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
	17/65 - 15	G80 R	736441	√
15′	17/65 - 15	G91 L	775566	√
	17/65 - 15	G91 R	260370	√
			L : Left (gauche	) / R : Right (droite)

	COMPOUND	SURF	FACE	POLL	UTION	CONDITIONS				
		ROLLING	BRITTLE	POLLUTED SOIL	CLEAN SOIL	MUD	DAMP	DRY		
G70	SOFT									
G80	MEDIUM									
G91	HARD									



## MICHELIN WARM-UP TECHNOLOGY

MICHELIN racing elastomers, used in rubber compounds and combined with high-tech synthetic resins, enabling ultra-fast warm up to reach the optimum temperature.

## MICHELIN RALLY FORCE TECHNOLOGY

The rubber compound is derived from the WRC gravel tire, providing resistance to wear in off-road conditions.

## MICHELIN S-SIPE TECHNOLOGY

Self-locking sipes provide hundreds of biting edges to optimize grip without sacrificing the stability tread blocks.



RECUTTING

## MICHELIN

## LTX FORCE T

## **GRIP** ON **ROLLING TRACKS**



### GRIP

The zig-zag sipes provide traction during braking and acceleration, preventing the tire from deforming under load and maximizing grip.



## PRECISE, IMMEDIATE FEEDBACK

Thanks to the interlocking L-block tread pattern, the tire offers good stability and driving precision.



### SHOCK-RESISTANT

The MICHELIN LTX Force T, designed without reinforcements, retains its lightness while resisting impacts on rolling dirt rallies. Its tread pattern, made up of massive, wide wells, adds robustness without creating thermal runaway.



Technologies:



MICHELIN **L-GRIP BLOCK** 



MICHELIN **3D-SIPE LOCK** 



MICHELIN RFID



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE	
	14/62 - 15	71	396095	√		
	14/62 - 15	81	959271	$\checkmark$		
15'	16/64 - 15	81	817461	$\checkmark$		*
	16/64 - 15	91	411526	$\checkmark$		*
	17/65 - 15	71	192795			*

DIAMÈTRE I	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	CONNECTABLE	
	17/65 - 15	81	930197		$\checkmark$	*
15'	17/65 - 15	81	262110			*
15	17/65 - 15	91	989374			*
	17/65 - 15	91	920982		$\checkmark$	*

<sup>\*</sup> while stocks last

	COMPOUND	SURFACE		POLL	UTION	CONDITIONS		
		ROLLING	BRITTLE	POLLUTED SOIL	CLEAN SOIL	MUD	DAMP	DRY
71	SOFT							
<i>81</i>	MEDIUM							
91	HARD							

Services & solutions

## MICHELIN LTX FORCE T XL

MICHELIN **L-GRIP BLOCK** 



Technologies:

MICHELIN RALLY FORCE





MICHELIN **3D-SIPE LOCK** 





## THE **REINFORCED TIRE** FOR ROLLING TRACKS

## SIDEWALL PROTECTION

The MICHELIN LTX Force T XL reinforces the sidewalls thanks to the extra thickness of the rubber, making them more resistant to lateral aggression and



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
	16/64 - 15	72	891107	$\checkmark$
	16/64 - 15	82	646695	$\checkmark$
15'	16/64 - 15	92	416870	$\checkmark$
15	17/65 - 15	72	507186	$\checkmark$
	17/65 - 15	82	982607	$\checkmark$
	17/65 - 15	92	486911	$\checkmark$

	COMPOUND	SURFACE		POLL	UTION	CONDITIONS		
		ROLLING	BRITTLE	POLLUTED SOIL	CLEAN SOIL	MUD	DAMP	DRY
72	SOFT							
82	MEDIUM							
92	HARD							



## **TECHNICAL DATA**ASPHALT & SNOW RALLY

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	16/61 - 15	PILOT ALPIN	NA01 CL	Studded Snow	6,5	160	202	610	1926
	19/58 - 15	PILOT SPORT A	MW1	Wet	6	190	192	579	1820
15'	19/58 - 15	PILOT SPORT R	11	Soft	6,5	177	194	581	1825
	19/58 - 15	PILOT SPORT R	21	Medium	6,5	177	194	581	1825
	19/58 - 15	PILOT SPORT R	31	Hard	6,5	177	194	581	1825
	16/61 - 16	PILOT ALPIN	NA01	Snow	6,5	160	197	615	1934
	16/61 - 16	PILOT ALPIN	NA01 CL	Studded Snow	6,5	160	197	615	1934
	19/60 - 16	PILOT SPORT A	MW1	Wet	6,5	182	197	600	1887
	19/60 - 16	PILOT SPORT R	P01	Wet	6,5	180	198	602	1851
16'	19/60 - 16	PILOT SPORT R	11	Soft	6,5	180	198	602	1851
70	19/60 - 16	PILOT SPORT R	21	Medium	6,5	180	198	602	1851
	19/60 - 16	PILOT SPORT R	31	Hard	6,5	180	198	602	1851
	19/60 - 16	PILOT SPORT PRO Rally	S10	Soft	6,5	169	198	599	1832
	19/60 - 16	PILOT SPORT PRO Rally	M20	Medium	6,5	169	198	599	1832
	19/60 - 16	PILOT SPORT PRO Rally	H30	Hard	6,5	169	198	599	1832
	16/61 - 17	PILOT ALPIN	NA01	Snow	7	159	197	610	1937
	16/61 - 17	PILOT ALPIN	NA01 CL	Studded Snow	7	159	197	610	1937
	19/63 - 17	PILOT SPORT A	MW1	Wet	7	182	202	629	1976
	19/63 - 17	PILOT SPORT R	11	Soft	7	180	199	631	1942
	19/63 - 17	PILOT SPORT R	21	Medium	7	180	199	631	1942
17'	19/63 - 17	PILOT SPORT R	31	Hard	7	180	199	631	1942
	19/63 - 17	PILOT SPORT PRO Rally	<i>S</i> 10	Soft	7	179	203	628	1924
	19/63 - 17	PILOT SPORT PRO Rally	M20	Medium	7	179	203	628	1924
	19/63 - 17	PILOT SPORT PRO Rally	H30	Hard	7	179	203	628	1924
	20/63 - 17	PILOT SPORT R	11	Soft	8	200	222	626	1967
	20/63 - 17	PILOT SPORT R	21	Medium	8	200	222	646	1980
	18/65 - 18	PILOT ALPIN	NA01	Snow	8	175	221	650	2042
	18/65 - 18	PILOT ALPIN	NA01 CL	Studded Snow	8	175	221	650	2042
	20/65 - 18	PILOT SPORT A	MW1	Wet	8	220	226	646	1980
	20/65 - 18	PILOT SPORT A	SS02	Super Soft	8	202	225	649	2038
	20/65 - 18	PILOT SPORT A	S10	Soft	8	202	225	649	2038
	20/65 - 18	PILOT SPORT A	M20	Medium	8	202	225	649	2038
18'	20/65 - 18	PILOT SPORT A	H31	Hard	8	202	225	649	2038
	24/65 - 18	PILOT SPORT R VERSION GT	P01	Wet	9	229	251	648	2038
	24/65 - 18	PILOT SPORT R VERSION GT	11	Soft	9	226	249	649	2038
	24/65 - 18	PILOT SPORT R VERSION GT	21	Medium	9	229	251	648	2038
	29/65 - 18	PILOT SPORT R VERSION GT	P01	Wet	12	321	323	651	2047
	29/65 - 18	PILOT SPORT R VERSION GT	21	Medium	12	321	321	652	2047
	29/65 - 18	PILOT SPORT R VERSION GT	32	Hard	12	321	321	652	2047

## ICE RALLY

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	13/64 - 15	X-ICE NORTH	NA01	Studded Ice	6	133	181	640	2011
15'	15/65 - 15	X-ICE NORTH	NA01 L	Studded Ice	7	150	204	650	1954
	15/65 - 15	X-ICE NORTH	NA01 R	Studded Ice	7	150	204	650	1954

## **GRAVEL RALLY**

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	14/62 - 15	LTX FORCE T	71	Soft	6	145	184	624	1871
	14/62 - 15	LTX FORCE T	81	Medium	6	145	184	624	1871
	16/64 - 15	LTX FORCE T	81	Medium	6	164	205	644	1934
	16/64 - 15	LTX FORCE T	91	Hard	6	164	205	644	1934
	17/65 - 15	LTX FORCE T	71	Soft	6	186	197	643	2019
	17/65 - 15	LTX FORCE T	81	Medium	6	186	197	643	2019
	17/65 - 15	LTX FORCE T	91	Hard	6	186	197	643	2019
	16/64 - 15	LTX FORCE T XL	72	Soft	6	170	198	633	1910
	16/64 - 15	LTX FORCE T XL	82	Medium	6	170	198	633	1910
	16/64 - 15	LTX FORCE T XL	92	Hard	6	170	198	633	1910
15'	17/65 - 15	LTX FORCE T XL	72	Soft	7	180	208	645	1950
13	17703 - 13	LIX TORCE TAE	/2	30,1	6	180	196	645	1950
	17/65 - 15	LTX FORCE T XL	82	Medium	7	180	208	645	1950
	17703 - 13	ETX TORCE TAE	02	Wediam	6	180	196	645	1950
	17/65 - 15	LTX FORCE T XL	92	Hard	7	180	208	645	1950
	17703 - 13	LIX TORCE TAE	32	Trara	6	180	196	645	1950
	17/65 - 15	PILOT SPORT GRAVEL	G70 L	Soft	7	180	213	648	2030
	17/65 - 15	PILOT SPORT GRAVEL	G70 R	Soft	7	180	213	648	2030
	17/65 - 15	PILOT SPORT GRAVEL	G80 L	Medium	7	180	213	648	2030
	17/65 - 15	PILOT SPORT GRAVEL	G80 R	Medium	7	180	213	648	2030
	17/65 - 15	PILOT SPORT GRAVEL	G91 L	Hard	7	180	213	648	2030
	17/65 - 15	PILOT SPORT GRAVEL	G91 R	Hard	7	180	213	648	2030

<sup>\*</sup> while stocks last

## CLASSIC COMPETITION

59 - ADVICE AND PRESSURES

60 - MICHELIN TB5+

60 - MICHELIN TB15+

61 - MICHELIN PB20

62 - TECHNICAL DATA

MICH







## Cold pressure preparation

We can distinguish between cold pressure and hot pressure. Recommended cold pressure varies depending on the temperature of the air/ground and the length of special stages. Hot pressure corresponds to the value measured at the end of a special stage.

adapted. Consult a professional.

Data provided for informational purposes and may vary

depending on actual conditions of use. In the event of use outside of normal conditions of use, these recommendations must be



We recommend a cold pressure, i.e. on departing the "pit", of 1.8 bar.

The aim is to have a hot pressure between:



dry conditions - 2.0 bar to 2.3 bar maximum



rainy conditions - 2.1 bar to 2.3 bar maximum



## Set up advice

It is important to measure the pressure at the end of the special stage which corresponds to the operating pressure.

If operating pressure is:

- below operating range: no grip felt.
- higher than the operating range: understeer, high degradation and increased wear at the centre of the tread area.

In rainy conditions, we recommend a cold pressure 0.1 bar higher than in dry conditions.

## DESIGNED FOR CLASSIC CAR RALLIES ON DRY ROADS



## EXCELLENT GRIP ON DRY AND ABRASIVE ROADS

New tread compound  $^{(1)}$  for fast start-up and grip on dry and abrasive roads. Available in 2 compounds adapted to different conditions.



## **EASE OF HANDLING**

New architecture<sup>(1)</sup> and new tread compound <sup>(1)</sup> enable the tire to quickly reach the right operating temperature, allowing for confidence building feedback

IS AVAILABLE IN TWO TYPES OF ERASERS: F = SOFT | R = MEDIUM

1) comparison with MICHELIN TB5

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
	18/60 - 15 (225/50 R15 79V)	F	530264
	18/60 - 15 (225/50 R15 79W)	R	510252
	23/59 - 15 (265/40 R15 92W)	R	543567
15'	23/62 - 15 (275/45 R15 86W)	F	348012
15	23/62 - 15 (275/45 R15 86W)	R	952030
	26/61 - 15 (285/40 R15 87W)	F	027687
	26/61 - 15 (285/40 R15 87W)	R	062696
	29/61 - 15 (335/35 R15 93W)	R	598686



## A MIXED TIRE FOR ROAD USE AND CLASSIC CAR RALLIES



## EXCELLENT GRIP ON WET ROADS

The MICHELIN TB15+ is made up of several longitudinal lines for excellent water evacuation.



### CONSISTENT PERFORMANCE

Designed with a tread compound for consistent performance in changing wet conditions.

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
	18/60 - 15 (215/55 R15 79V)	Mixed	920266
15'	23/62 - 15 (275/45 R15 86V)	Mixed	194557
15	26/61 - 15 (295/40 R15 87V)	Mixed	979686
	29/61 - 15 (345/35 R15 93V)	Mixed	454443



## THE **FULL-WET** TIRE FOR CLASSIC CAR RALLIES



## **EXCELLENT GRIP ON WET ROADS**

Thanks to a tread depth higher than the MICHELIN TB15+, the MICHELIN PB20 allows rallying on roads with very high water levels.

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
15'	18/60 - 15 (205/55 R15 79H)	Wet	566033
15′	23/62 - 15 (275/45 R15 86H)	Wet	217685



## TECHNICAL DATA

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE SECOMMANDEE / RECOMMENDED RIM WIDTH	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	18/60 - 15	TB5+	F	Soft	6 - 8	223	605	1912
	18/60 - 15	TB5+	R	Medium	6 - 8	223	605	1912
	18/60 - 15	TB15+	Mixed	Mixed	6 - 8	218	619	1945
	18/60 - 15	PB20	Wet	Wet	5,5 - 7,5	220	609	1869
	23/59 - 15	TB5+	R	Medium	9 - 10,5	274	592	1817
	23/62 - 15	TB5+	F	Soft	8,5 - 10,5	272	620	1903
15′	23/62 - 15	TB5+	R	Medium	8,5 - 10,5	272	620	1903
15	23/62 - 15	TB15+	Mixed	Mixed	8,5 - 10,5	266	632	1987
	23/62 - 15	PB20	Wet	Wet	8,5 - 10,5	266	628	1928
	26/61 - 15	TB5+	F	Soft	9,5 - 11	288	610	1920
	26/61 - 15	TB5+	R	Medium	9,5 - 11	288	610	1920
	26/61 - 15	TB15+	Mixed	Mixed	9,5 - 11	290	618	1942
	29/61 - 15	TB5+	R	Medium	11 - 13	340	616	1890
	29/61 - 15	TB15+	Mixed	Mixed	11,5 - 13,5	334	626	1966

F = Soft - R = Medium while stocks last







Data provided for informational purposes and may vary depending on actual conditions of use. In the event of use outside of normal conditions of use, these recommendations must be adapted.

Consult a professional.



## Cold or hot pressure

We can distinguish between cold and hot pressure. Recommended cold pressure varies depending on the ambient ground temperature and the type of vehicle. Recommanded hot pressure varies depending on the length of the race and the temperature of the ground.

## **Dry conditions**

		Ground temperature					
-;•;-	Pression	5 to 15°C	15 to 30°C	More than 30°C			
Cinalo coator	Cold	1.5 bar	1.4 bar	1.35 bar			
Single-seater	Hot	1.5 to 1.6 bar					
Prototypa	Cold	1.5 bar	1.44 bar	1.35 bar			
Prototype	Hot		1.5 to 1.6 bar				
Touring &	Cold	1.8 bar	1.7 bar	1.6 bar			
Production	Hot		2 to 2.1 bar				
GT	Cold	1.85 bar	1.8 bar	1.7 bar			
G1	Hot		2 to 2.1 bar				

## Wet conditions

			Water height	
800	Pression	High pressure, heavy rain, storm	Moderate, continuous rain	Low rainfall & drying track
Single-seater	Cold	1.6 bar	1.5 bar	1.4 bar
Sirigie-seater	Hot		1.55 to 1.7 bar	
Drototypo	Cold	1.6 bar	1.5 bar	1.4 bar
Prototype	Hot		1.55 to 1.7 bar	
Touring &	Cold	1.9 bar	1.8 bar	1.7 bar
Production	Hot		2 to 2.1 bar	
CT	Cold	1.9 bar	1.85 bar	1.75 bar
GT	Hot		2 to 2.1 bar	

In case of rain, you can use the Michelin rain circuit range. Consult an expert.

## MICHELIN

**PILOT SPORT** H S5C+

## **IMMEDIATE WARM UP FOR BETTER TIMES**



### INSTANT WARM UP

Thanks to a new synthetic tread compound, the MICHELIN Pilot Sport S5C+ offers instant grip and good consistency during a hill climb.

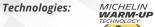


## EXTENDED LIFE

New tread compound limits pick-up for better grip and longer life for more climbs.  $^{(1)}$ 



Ø13," Ø15," Ø17," Ø18,"





DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	CAI	
13'	24/57 - 13	440225	*
15′	19/57 - 15	826415	
17'	20/61 - 17	709288	
17	24/61 - 17	186062	

(1) Comparison made with the MICHELIN Pilot Sport S5C \*While stocks last

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	CAI
	24/65 - 18	097251
18'	27/65 - 18	008126
10	30/65 - 18	297011
	31/71 - 18	824574



## TECHNICAL DATA

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCUMFERENCE (MM)	
13'	24/57 - 13	PILOT SPORT H S5C+	10	241	289	585	1765	*
15'	19/57 - 15	PILOT SPORT H S5C+	7	185	206	573	1774	
17'	20/61 - 17	PILOT SPORT H S5C+	8	187	219	606	1870	
17	24/61 - 17	PILOT SPORT H S5C+	9	235	250	605	1857	
	24/65 - 18	PILOT SPORT H S5C+	9	229	251	647	1988	
18'	27/65 - 18	PILOT SPORT H S5C+	11	262	298	647	1988	
10	30/65 - 18	PILOT SPORT H S5C+	12.5	288	329	650	1996	
	31/71 - 18	PILOT SPORT H S5C+	13	316	343	709	2192	

<sup>\*</sup> while stocks last

## CIRCUIT

## 70 - ADVICE AND PRESSURES

## 72 - TOURING, GT, PROTOTYPE

- 74 MICHELIN PILOT SPORT PRO GT
- 76 MICHELIN PILOT SPORT CUP GT
- 78 MICHELIN PILOT SPORT CUP T
- 80 MICHELIN PILOT SPORT GT M
- 81 MICHELIN PILOT SPORT GT M+
- 82 MICHELIN PILOT SPORT GT L
- 83 MICHELIN PILOT SPORT GT P2L
- 83 MICHELIN PILOT SPORT GT P2H

## 84 - PORSCHE CUP

- 86 MICHELIN PILOT SPORT CUP N3 & N3R
- 87 MICHELIN PORSCHE CUP N2 & N2R

## 88 - SINGLE-SEATER

- 89 MICHELIN PILOT SPORT M S512
- 89 MICHELIN PILOT SPORT M P512

## 90 - PROTOTYPE LEGEND

- 91 MICHELIN PILOT SPORT LEGEND S819
- 91 MICHELIN PILOT SPORT LEGEND P219

## 92 - TECHNICAL DATA





Data provided for informational purposes and may vary depending on actual conditions of use. In the event of use outside of normal conditions of use, these recommendations must be adapted. Consult a professional.



## Cold pressure preparation

To target a hot pressure (working pressure), it is first necessary to determine the starting pressure, known as the cold pressure.

When the tire is warmed up, we can adopt a rule of thumb, which remains a rough guide, but which is reliable:  $1^{\circ}C = 0.01$  bar.

For example: 1.20 bar at 20°C becomes 1.30 at 30°C.

Alternatively, you can use a «control set». In other words, a reference set, stored at the same ambient temperature as the other tires, which will enable you to adjust the cold pressure of your use sets throughout the day.



## Warm up

If you use a heater cabinet or tire warmers, the maximum heating temperature must not exceed the internal rolling temperature of the tires.

Above this temperature, the properties of the rubber can change and thus degrade performance.

The minimum warm-up time is 45' to reach stabilisation.

The maximum heating time is 2 hours (beyond this, there is a risk of the rubber changing).



## Set-up tips

- Follow our recommendations (camber values and pressure according to vehicle load).
- It is possible to adjust the vehicle's front and rear pressures in order to improve the balance.

E.g.: If the car oversteers, apply a lower pressure at the rear than at the front.

- It is possible to mix the front and rear rubbers if there is a front warm-up problem for propulsion, e.g.: S8 front and S9 rear.
- For a rain tire, adjust the pressure in accordance with the water quantities. (Increase the pressure in the event of aquaplaning, to lower the contact area).



## TOURING, GT, PROTOTYPE

		COMPOUND	SURFACE ABRASIVITY		
			*	++	+++
<b>MICHELIN</b> PILOT SPORT CUP <sup>GT</sup>	H1	HARD			
MICHELIN PILOT SPORT CUP <sup>T</sup>	M1	MEDIUM			
	H1	HARD			
<b>MICHELIN</b> PILOT SPORT GT M	<i>57</i>	SOFT			
	58	MEDIUM			
	<i>5</i> 9	HARD			
MICHELIN	<i>58</i>	MEDIUM			
PILOT SPORT CUP M+	<i>5</i> 9	HARD			
MICHELIN PILOT SPORT GT L	<i>58</i>	MEDIUM			
	<i>5</i> 9	HARD			
MICHELIN PILOT SPORT GT	P2L	RAIN			
	P2H	RAIN			



	5	GROUND TEMPERATURE (°C)									
DRY	DAMP	WET	0	5	10	15	20	25	<i>30</i>	<i>35</i>	40+
							//////				



# MICHELIN PILOT SPORT PRO <sup>GT</sup>



## HIGH PERFORMANCE SLICK FOR GT



#### **CONSISTENT PERFORMANCE**

The tire's design improves endurance and longevity on the track while maintaining optimum grip levels.



#### **BETTER DRIVING\***

The new tire architecture offers greater stability on corner entry and lateral support to improve the car's balance.



#### **QUICK WARM UP\***

The tread is made of a new type of rubber that reaches the right operating temperature more quickly.





APPROVED FOR UNITED STATES ONLY













DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
10/	30/68 - 18	H1	159609	✓
18′	31/71 - 18	H1	854755	✓

\*In-house studies conducted since September 2021 on various GT3 class vehicles. Comparison with the MICHELIN Pilot Sport M S9 (S9M) tire on different circuits with varying track temperatures.



## **MICHELIN** WARM-UP TECHNOLOGY

MICHELIN racing synthetic elastomers, used in rubber blends and combined with high-tech synthetic resins, promote ultra-rapid warm-up to quickly reach optimum operating temperature.

# MICHELIN DRY ADAPTIVE COMPOUND TECHNOLOGY

Rubber with a specific formulation providing grip and consistency in all dry conditions. Wide window of operation.

## MICHELIN WEC INSPIRED COMPOUND TECHNOLOGY

A new tread compound inspired by our confidential WEC tire that offers dynamic handling and consistent performance.



**MICHELIN** POYNAMIC RESPONSE TECHNOLOGY

An aramid/nylon hybrid belt ensures optimum transmission of driver input.

**RFID**TECHNOLOGY

# MICHELIN PILOT SPORT CUP <sup>GT</sup>



#### THE SLICK TIRE FOR GT



#### RAPID WARM UP

The tread is made of a new type of rubber that quickly reaches the optimal operating temperature.



#### **EASE OF HANDLING**

The tire's new architecture provides greater stability on corner entry, as well as lateral support to improve the car's balance.



#### HIGH PEAK PERFORMANCE

The tire's maximum potential helps to improve lap times over a stint.











DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
	30/65 - 18	H1	787739	√
18′	30/68 - 18	H1	112873	√
	31/71 - 18	H1	799048	√

	COMPOUND	SURFACE ABRASIVITY		CONDITIONS			GROUND TEMPERATURE (°C)									
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	<i>35</i>	40+
Н1	HARD							П								



# **MICHELIN**PILOT SPORT CUP <sup>T</sup>



# THE SLICK TIRE FOR TOURING VEHICLES



#### **DRIVING PRECISION**

Offers precise steering thanks to a hybrid aramid/ nylon belt, designed to ensure optimum transmission of steering input.



# OPTIMIZED CONSISTENCY AND LONGEVITY

The compound has been designed to ensure consistency and longevity in both sprint and endurance races.



#### RAPID WARM UP

The tread is made of a new type of compound that enables the optimal operating temperature to be reached more quickly.



MICHELIN **WARM-UF** 



MICHELIN
TRACK LONGEVITY 2,0
TECHNOLOGY



MICHELIN DYNAMIC RESPONSE TECHNOLOGY



Technologies:

MICHELIN

RFID

TECHNOLOGY



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
17′	20/61 - 17	M1	956216	√
	20/61 - 17	H1	510079	$\checkmark$

	COMPOUND	SURFACE ABRASIVITY			MPOUND SURFACE ABRASIVITY CONDITIONS						c	RO	UNL	) TE	MPI	ERA	TUR	E (	PC)
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	<i>35</i>	40+			
M1	MEDIUM							Г											
Н1	HARD																		



# MICHELIN PILOT SPORT GT M



#### THE REFERENCE FOR A SLICK TIRE!



#### **OPTIMIZED GRIP**

Thanks to a crown architecture inspired by the tires used in WEC (World Endurance Championship), the footprint is increased, improving grip.



#### PRECISE FEEDBACK

The casing is specifically designed to absorb the weight/ power of new vehicles and ensure greater driving precision.









Technologies:

MICHELIN TRACK LONGEVITY 2.0



MICHELIN **DYNAMIC RESPONSE** 





RFID

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
15′	19/57 - 15	S8	862104	
17′	20/61 - 17	S9	721630	√
	24/64 - 18	S9	246828	√
	25/64 - 18	S8	208081	√
	25/64 - 18	S9	173686	√
18'	27/65 - 18	S8	320739	$\checkmark$
10	30/65 - 18	S7	344563	$\checkmark$
	30/65 - 18	S8	050951	√
	30/65 - 18	S9	520590	√
	30/68 - 18	S7	654850	√

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
	30/68 - 18	S8	377912	√
	30/68 - 18	S9	763553	√
	31/71 - 18	S7	620053	√
18′	31/71 - 18	S8	593443	√
	31/71 - 18	S9	927289	√
	33/68 - 18	S8	272434	√
	33/68 - 18	S9	120877	√
	24/65 - 19	S8	948272	√
19′	24/65 - 19	S9	088188	√
	31/71 - 19	S9	350154	√

	COMPOUND	SURFACE ABRASIVITY			OMPOUND SURFACE ABRASIVITY CONDITIONS				NS	c	RO	UNE	) TE	MPI	ERA	TUR	<b>E</b> (°	PC)
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	<i>35</i>	40+		
<i>57</i>	SOFT																	
58	MEDIUM																	
<i>59</i>	HARD																	

MICHELIN

#### **ENDURANCE**

Thanks to its reinforced architecture, the tire offers improved endurance compared to its predecessor <sup>(1)</sup>.



#### **OPTIMIZED GRIP**

Thanks to a crown architecture inspired by the tires used in WEC (World Endurance Championship), the footprint is increased, improving grip.



Technologies:

MICHELIN
TRACK LONGEVITY 2,0
TECHNOLOGY



MICHELIN DYNAMIC RESPONSE



MICHELIN RFID TECHNOLOGY



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID	
17′	24/61 - 17	S8	703963		
18′	27/65 - 18	S9	191018	√	
10	30/65 - 18	<b>S9</b>	237295	$\checkmark$	*US only

(1) Comparison made with 24/61-17 MICHELIN PILOT SPORT GT S8M

	COMPOUND	SURFACE ABRASIVITY		MPOUND SURFACE ABRASIVITY CONDITIONS				GROUND TEMPERATURE (°C)								
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	<i>35</i>	40+
58	MEDIUM							П								
<i>59</i>	HARD															

Services & solutions

**MICHELIN**PILOT
SPORT
GT L



#### THE **VERSATILE SLICK** TIRE



#### CONSISTENT PERFORMANCE

The tire's durable casing guarantees consistent performance lap after lap, all the way to the finish line.

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
15′	18/58 - 15	S9	370109
16′	23/61 - 16	S9	273199
17'	20/61 - 17	S8	853709
17	24/61 - 17	S8	146154

\*while stocks last

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	ı
	25/64 - 18	S8	373234	
	25/64 - 18	S9	205461	
18′	27/65 - 18	S8	873904	
	27/65 - 18	S9	033685	
	27/68 - 18	S8	863682	

	COMPOUND	SURFA	CE ABRAS	SIVITY	c	CONDITIO	NS	c	RO	UNE	TE	MP	ERA	TUR	<b>PE</b> (°	)C)
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	<i>35</i>	40+
58	MEDIUM															
59	HARD															





# DESIGNED FOR WET AND DRY TRAILS



#### GRIP

The tread pattern ensures good water evacuation in the wet, while maintaining performance in the dry. The two longitudinal lines limit the risk of aquaplaning.

Technologies:

MICHELIN WATER BRAKE TECHNOLOGY



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
15′	18/58 - 15	P2L	698915
16′	23/61 - 16	P2L	853299
	24/64 - 18	P2L	503749
18'	25/64 - 18	P2L	448993
10	27/65 - 18	P2L	463077
	27/68 - 18	P2L	765707

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
	30/65 - 18	P2L	619653
18′	30/68 - 18	P2L	447350
	31/71 - 18	P2L	797297
19'	24/65 - 19	P2L	206124
19	31/71 - 19	P2L	398275

Ø <b>15</b> "	Ø <b>16</b> ‴
Ø 18″	Ø 19,"

	COMPOUND	SURFA	CE ABRA	SIVITY	c	ONDITIO	NS	d	RO	UNE	) TE	MP	ERA	TUR	RE (C	C)
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	35	40+
P2L	RAIN							П								

# **MICHELIN** PILOT SPORT GT P2H



#### A FULL-WET CIRCUIT TIRE



#### GRIP

Thanks to a high groove rate, the tire has great evacuation potential with very high water levels.

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
15′	19/57 - 15	P2H	964131
17'	20/61 - 17	P2H	178573
17	24/61 - 17	P2H	201854
19'	24/65 - 19	P2H	588214
19	28/69 - 19	P2H	454416

	COMPOUND	SURFA	CE ABRA.	SIVITY	d	CONDITION	v <i>s</i>	C	RO	UNE	) TE	MP	ERA	TUR	PE (°	PC)
		+	++	+++	DRY	DAMP	WET	o	5	10	15	20	25	30	<i>35</i>	40+
P2H	RAIN							Г								



# **MICHELIN**PILOT SPORT CUP N3 & N3R



#### SPECIFICALLY DEVELOPED FOR THE **PORSCHE 911 GT3 CUP (992)**



#### **GRIP AND LONGEVITY**

Composed of a different mixture of front and rear axles, it provides grip and durability.



#### **VERSATILE**

A unique tread compound that enables the tire to perform in all conditions.



#### CONSISTENT PERFORMANCE

Architecture inspired by GT500 and WEC and adapted for Porsche race formats, it guarantees consistent performance throughout the race.



Technologies:







As with every project, whether on the track or on the road, MICHELIN is committed to designing and supplying tires that are perfectly suited to Porsche vehicles, in order to take full advantage of their potential.





DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
18′	30/65 - 18	N3	530030	√
18'	31/71 - 18	N3R	242655	√

Services & solutions



#### **GRIP AND LONGEVITY**

**Grip** Designed to meet the requirements of Porsche vehicles, the MICHELIN Porsche Cup N2 provides good lateral support



Developed specifically for Porsche racing formats, its architecture offers consistent performance.

Technologies:

Ø 18,"

**CUP** 

MICHELIN DRY ADAPTIVE COMPOUND



DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	
	25/64 - 18	N2	386513	
18′	27/65 - 18	N2	907466	
	27/68 - 18	N2	587114	

DIAMÈTRE	DIMENSIONS	CRAN	CAI
	27/68 - 18	N2R	122997
18′	30/68 - 18	N2	628143
	31/71 - 18	N2	297596

\*while stocks last





Circuit | Single-seater

MICHELIN **PILOT SPORT** 

M S512



#### THE 1ST MICHELIN SINGLE-SEAT 17" SLICK



#### **CORNERING STABILITY**

The 17" tire increases cornering speed thanks to a sidewall height reduced by 15%  $^{(1)}$ .



#### INCREASED GRIP

20% larger contact patch  $^{\mbox{\tiny (1)}}$  for superior grip in all racing situations.



#### CONSISTENT PERFORMANCE

A new casing and a compound offer consistent performance lap after lap all the way to the finish line.

#### CO-DEVELOPED WITH TATUUS ON THE RENAULT TATUUS F3 T-3 18

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
17'	24/61 - 17	S512	390956
17	28/64 - 17	S512	947497

Technologies:



MICHELIN

DYNAMIC RESPONSE
TECHNOLOGY



(1) compared with a MICHELIN Pilot Sport S412 in size 13

# MICHELIN **PILOT SPORT** M P512

Ø 17"



#### THE 17" SINGLE-SEATER RAIN TIRE



#### **WET GRIP**

Thanks to its highly grooved tread pattern, the MICHELIN Pilot Sport P512 has a high evacuation potential to provide grip on wet tracks.

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
17'	24/61 - 17	P512	227151
17	28/64 - 17	P512	901628

CO-DEVELOPED WITH TATUUS ON THE RENAULT TATUUS F3 T-3 18



Thanks to a rubber compound and architecture adapted to the requirements of historic LMP1 and LMP2 vehicles, it guarantees rapid warm up and optimum grip.



#### FEEDBACK

A tire designed to allow drivers to rediscover the driving pleasure of legendary prototypes.

Ø 18″	

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI	RFID
	33/65 - 18	S819	188873	√
18'	33/68 - 18	S819	840076	$\checkmark$
10	36/71 - 18	S819	466857	$\checkmark$
	37/71 - 18	S819	993138	√

# MICHELIN PILOT SPORT LEGEND P219



# THE **RAIN TIRE** FOR LEGENDARY PROTOTYPES!



#### **EXTREME GRIP IN THE RAIN**

Thanks to its high groove ratio, the tire has great evacuation potential on tracks with very high water levels.

Ø	18''

DIAMETER / DIAMÈTRE	SIZE / DIMENSIONS	COMPOUND / CRAN	CAI
	33/65 - 18	P219	012133
18′	33/68 - 18	P219	627171
	36/71 - 18	P219	476628

# **TECHNICAL DATA**

### **CIRCUIT GT - TOURING - PROTOTYPE**

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	18/58 - 15	PILOT SPORT GT L	S9	Hard	8	179	220	588	1847
15'	19/57 - 15	PILOT SPORT GT M	S8	Medium	7	185	206	573	1774
4.51	19/57 - 15	PILOT SPORT GT	P2H	Wet	7	185	206	573	1762
16'	23/61 - 16	PILOT SPORT GT L	S9	Hard	10	236	276	616	1935
	20/61 - 17	PILOT SPORT GT L	S8	Medium	8	190	225	604	1890
	20/61 - 17	PILOT SPORT GT M	S9	Hard	8	187	219	606	1870
	20/61 - 17	PILOT SPORT CUP T	M1	Medium	7 (Clio Cup)	183	207	607	1907
17'	20/61 - 17	PILOT SPORT CUP <sup>↑</sup>	H1	Hard	7 (Clio Cup)	183	207	607	1907
	20/61 - 17	PILOT SPORT GT	P2H	Wet	8	191	223	604	1854
	24/61 - 17 24/61 - 17	PILOT SPORT GT M+ PILOT SPORT GT L	S8 S8	Medium	9	235 235	250 248	605 605	1857 1857
	24/61 - 17	PILOT SPORT GT	20 P2H	Medium Wet	9	224	248	610	1861
	24/64 - 18	PILOT SPORT GT M	S9	Medium	9,5	225	255	646	2000
	24/64 - 18	PILOT SPORT GT	P2L	Wet	9,5	225	255	651	2000
	25/64 - 18	PILOT SPORT GT M	S8	Medium	10	249	271	642	1990
	25/64 - 18	PILOT SPORT GT M	S9	Hard	10	249	271	642	1990
	25/64 - 18	PILOT SPORT GT L	S8	Medium	10	249	271	642	1990
	25/64 - 18	PILOT SPORT GT L	S9	Hard	10	249	271	642	1990
	25/64 - 18	PILOT SPORT GT	P2L	Wet	10	231	269	647	2031
	27/65 - 18	PILOT SPORT GT M	58	Medium	11	260	284	650	2015
	27/65 - 18	PILOT SPORT GT M+	<b>S9</b>	Medium	11	260	284	650	2015
	27/65 - 18	PILOT SPORT GT L	58	Medium	11	260	298	648	1990
	27/65 - 18	PILOT SPORT GT L	<b>S</b> 9	Medium	11	260	298	648	1990
	27/65 - 18	PILOT SPORT GT	P2L	Wet	11	260	299	652	2048
	27/68 - 18	PILOT SPORT GT L	S8	Medium	11	260	298	648	1990
	27/68 - 18	PILOT SPORT GT	P2L	Wet	11	255	295	684	2147
	30/65 - 18	PILOT SPORT GT M	S7	Soft	12,5	288	329	650	1996
	30/65 - 18	PILOT SPORT GT M	S8	Medium	12,5	288	329	650	1996
	30/65 - 18	PILOT SPORT GT M	<b>S9</b>	Hard	12,5	288	329	650	1996
18'	30/65 - 18	PILOT SPORT GT M+	S9	Hard	11	285	308	651	2045
	30/65 - 18	PILOT SPORT CUP GT	H1	Hard	12,5 (LMP3)	289	328	650	2042
	30/65 - 18	PILOT SPORT CUP GT	H1	Hard	11 (GT)	289	304	651	2046
	30/65 - 18	PILOT SPORT GT	P2L	Wet	12,5	295	325	653	2057
	30/68 - 18	PILOT SPORT GT M	<i>S</i> 7	Medium	12	306	327	678	2104
	30/68 - 18	PILOT SPORT GT M	S8	Hard	12	306	327	678	2104
	30/68 - 18	PILOT SPORT GT M	S9	Hard	12	306	327	678	2104
	30/68 - 18	PILOT SPORT CUP GT	H1	Hard	12,5	288	333	682	2141
	30/68 - 18	PILOT SPORT PRO GT	H1	Hard	12,5	298	334	688	2138
	30/68 - 18	PILOT SPORT GT	P2L	Wet	12,5	311	329	684	2150
	31/71 - 18	PILOT SPORT GT M	S7	Soft	13	310	347	712	2185
	31/71 - 18	PILOT SPORT GT M	S8	Medium	13	310	347	712	2185
	31/71 - 18	PILOT SPORT GT M	S9	Hard	13	310	347	712	2185
	31/71 - 18	PILOT SPORT CUP <sup>GT</sup> PILOT SPORT PRO <sup>GT</sup>	H1 H1	Hard Hard	13	307	353 352	712 715	2236 2223
	31/71 -18 31/71 - 18	PILOT SPORT FRO	P2L	Wet	13 13	312 313	347	713	2232
	33/68 - 18	PILOT SPORT GT M	S8	Medium	13	312	352	682	2146
	33/68 - 18	PILOT SPORT GT M	58 S9	Hard	13	312	352	682	2146
	24/65 - 19	PILOT SPORT GT M	58 S8	Medium	9	230	249	647	1986
	24/65 - 19	PILOT SPORT GT M	S9	Medium	9	230	249	647	1986
	24/65 - 19	PILOT SPORT GT	P2L	Wet	9,5	222	269	652	2023
19'	24/65 - 19	PILOT SPORT GT	P2H	Wet	10	227	249	647	1986
	28/69 - 19	PILOT SPORT GT	P2H	Wet	11	275	306	690	2148
	31/71 - 19	PILOT SPORT GT M	S9	Hard	13	316	343	709	2192
	31/71 - 19	PILOT SPORT GT	P2L	Wet	13	316	344	711	2232

## **CIRCUIT PORSCHE CUP**

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	JANTE PECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (IMM) / INFLATED DIAMETER (IMM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	25/64 - 18	PORSCHE CUP	N2	9,5	249	271	642	1990
	27/65 - 18	PORSCHE CUP	N2	11	263	295	646	2025
	27/68 - 18	PORSCHE CUP	N2	11	265	306	679	2111
	27/68 - 18	PORSCHE CUP	N2R	11	265	306	679	2111
18′	30/65 - 18	PILOT SPORT CUP	N3	12	296	320	651	2020
	30/68 - 18	PORSCHE CUP	N2	12	298	327	680	2108
	31/71 - 18	PILOT SPORT CUP	N3	13	311	348	708	2197
	31/71 - 18	PILOT SPORT CUP	N3R	13	311	348	708	2199
	31/71 - 18	PORSCHE CUP	N2	13	314	348	707	2131

## **CIRCUIT SINGLE-SEATER**

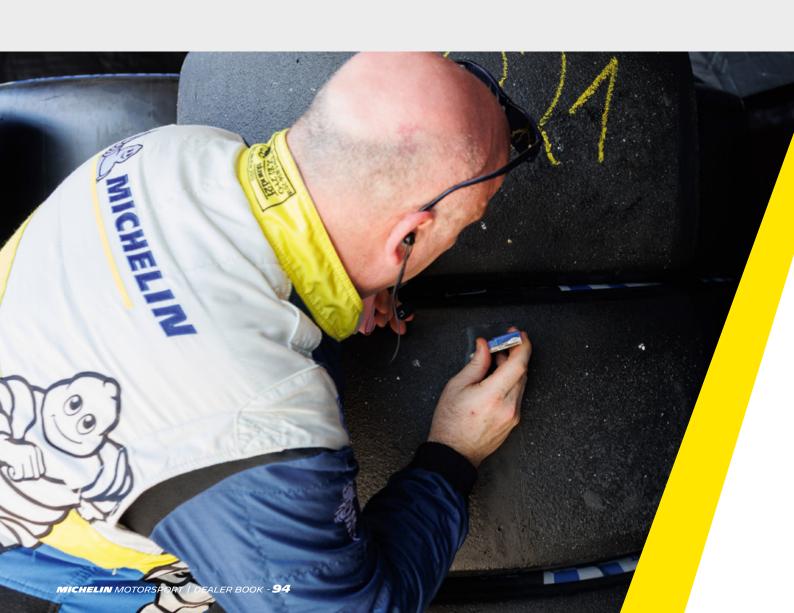
DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	24/61 - 17	PILOT SPORT M	P512	Wet	9	221	249	605	1863
17′	24/61 - 17	PILOT SPORT M	S512	Slick	9	220	249	602	1866
17	28/64 - 17	PILOT SPORT M	P512	Wet	11	291	315	647	1995
	28/64 - 17	PILOT SPORT M	S512	Slick	11	290	315	642	1992

## CIRCUIT PROTOTYPE LEGEND

DIAMETRE / DIAMETER	DIMENSION	GAMME / RANGE	CRAN / COMPOUND	APPLICATION	JANTE RECOMMANDEE / RECOMMENDED RIM WIDTH	LARGEUR DE LA BANDE DE ROULEMENT / TREAD WIDTH (MM)	SECTION DU PNEU / TIRE SECTION (MM)	DIAMETRE GONFLE (MM) / INFLATED DIAMETER (MM)	CIRCONFERENCE DE ROULEMENT / ROLLING CIRCU- MFERENCE (MM)
	33/65 - 18	PILOT SPORT LEGENDS	P219	Wet	13,5	312	357	651	2008
		PILOT SPORT LEGENDS	S819	Medium/Hard	13,5	312	357	651	2019
		PILOT SPORT LEGENDS	P219	Wet	13,5	312	360	681	2095
18'	33/68 - 18	PILOT SPORT LEGENDS	S819	Medium/Hard	13,5	312	360	681	2110
	36/71 - 18	PILOT SPORT LEGENDS	P219	Wet	14,5	350	391	710	2189
	<b>36/71 - 18</b> PILOT SPORT LEGENDS S819	S819	Medium/Hard	14,5	350	391	710	2200	
	37/71 - 18	PILOT SPORT LEGENDS	S819	Medium/Hard	14,5	356	400	715	2220

# TECHNICAL DATA

- 95 READING A TIRE
- 96 RECOGNIZING AND ACTING
- 98 DAMAGE ON THE TIRES
- 100 ADVICE AND USE
- **106 RECOMMENDATIONS**





E.G.: 20/65-18

20: Tread width in cm

**65**: Tire outside diameter in cm **18**: Rim diameter in inches

#### RECOGNISING AND ACTING

#### WHAT TO DO IN CASE OF DAMAGE?

If a customer notices a fault, he should report it to his distributor or to the technician on site.

To report a complaint, the distributor must log on to the following site:

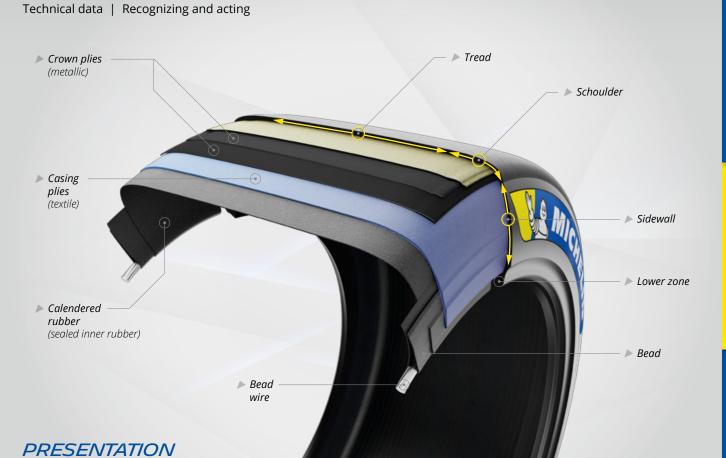


https://motorsportclaim.michelingroup.com

- Log on (ID + password)
- Press the 'add a new claim' button
- Fill in all the fields in each page.







OF A TIRE



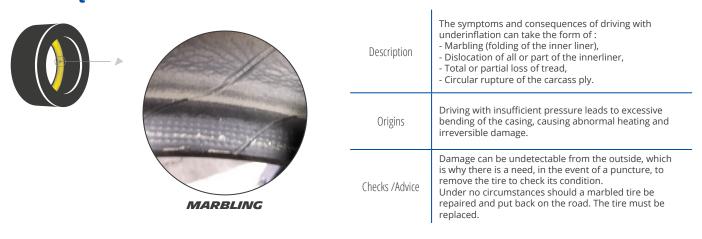
#### **DAMAGE ON THE TIRES**

#### NO INJURY OR DEFORMATION SHOULD BE OVERLOOKED

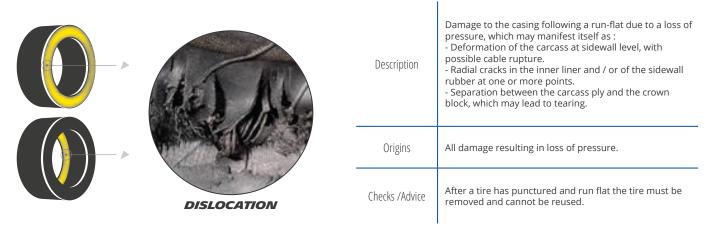
Any visible injury or abnormality (sidewall or tread deformation, deep cut, breakage, vibration, draught, etc.) must be examined in detail.

The diagnosis will determine whether the tire can be repaired or whether it should be taken off the road for good.

#### **CONSEQUENCES OF UNDER-INFLATION**



# BREAKAGE OR DISLOCATION OF THE CASING PLIES FOLLOWING FLAT RUNNING



#### **CRACKING SIDEWALL**







-	Description	Black rubber cracks.
	Origins	Excessive heating which may be due to: - Extensive work on the carcass (in particular underinflated), - Exposure to ozone or prolonged exposure to light, - Contact with products such as waxes, varnishes, washing products, etc.
	Checks /Advice	Following this type of incident, it is important to : - Check the conditions of use: roads, paths, type of driving to adapt the tire to the correct use, - Adjust the tire load and pressures,

shop or on the yard).

- Check tire storage and maintenance conditions (in the

#### **CROWN DEFORMATION** = EXTENDED SEPARATION OUR CROWN PLY CABLES WITHOUT RUST



-	Description	This damage may affect the top layer n°1 only, top sheet n°2 only or both top layers. Damage may manifest itself as deformation (bulging top) or torsion of the crown block, which may be localized over the width of the crown or circular on one edge.		
	Origins	This damage is linked to the ageing of the product.		
	Checks /Advice	A tire with a top deformation cannot be used. The tire must be replaced.		
		A tire with a top deformation cannot be used. The tire		

#### SEPARATION BETWEEN CROWN PLIES



Separation generally begins at the ends of the top layers and may develop into a pocket, or become generalised. Rubber between layers can be reduced to a powder. Sometimes you can observe a sticky rubber appearance. Sometimes shiny cables are evident due to friction. This damage can lead to a sudden loss of pressure or rupture of the carcass ply. This phenomenon can have several causes:

Origins

Description

- Overloading or under-inflation,
- Severe slippage, Prolonged driving at high speed,
- Localised stress when passing over an obstacle,
- Hammering.



#### INTRODUCTION

We recommend you comply with the following safety and usage instructions.

These instructions are valid subject to more restrictive local statutory provisions for tires decreed or required by the competition, raid or track organizers.

Failure to comply with these instructions or procedures may give rise to an incorrect fitting and cause premature deterioration of the tire.

Use on banking circuits requires specific tires and/or conditions of use. Prior to any use, read the recommendations for use on our website www.michelinmotorsport.com or make enquiries with your usual Michelin contact.



Tires must be chosen in accordance with the vehicle's equipment, as defined by the tire manufacturer and the vehicle manufacturer. On the same axle, make sure that the tires are of the same type (brand, trade name, dimensions, structure).

#### **BEFORE FITTING:**

- That the diameter of the rim corresponds exactly to the inside diameter of the tire.
- That the rim width conforms to that recommended by the manufacturer or, failing that, to the standards cited (ETRTO, TRA, JATMA, ETC.).
- That the type of rim (tubeless, tube type) corresponds to the type of tire.
- That the rim is in good condition and shows no signs of deterioration (cracks, deformation, etc.).
- The rim is strong enough to withstand the pressure required for fitting.
- That the tires show no signs of repair.
- The valves are in good condition; if not, replace them.



- Recutting a tire modifies its characteristics and performance. The operation requires suitable equipment and tools, as well as compliance with instructions.
- Recutting a used tire (not new) is prohibited.
- Prior to any recutting operation, contact your Michelin technician.

#### **REMINDER:**

Recutting or regrooving ECE R30-approved tires, intended for use on public roads, is prohibited.



- Never treat the tread rubber with a chemical.
- Do not use tires of which the background is unknown.
- Within the framework of the use of heating cabinets, never place fitted assemblies in contact with metal parts and/or directly over the heat source.
- Ensure that the pressure, bodywork, speed and axle load values are those recommended by Michelin in accordance with the intended use (update the recommendations in accordance with use).

Standard recommendations for use are available on our website www.michelinmotorsport.com or from your Michelin technician.





#### FITTING AND REMOVING A TIRE

Fitting, removing, inflating and balancing tires must be carried out using suitable equipment in good condition, and entrusted to trained and qualified personnel, who will ensure, in particular:

- Compliance with the constructor's guidelines and the legal rules in choosing tires.
- Prior inspection of the external and internal appearance of the tire by the fitter.
- Compliance with the tire fitting, removal, balancing and inflation procedures.
- Compliance with the positioning of the tire on the vehicle (left, right; front, rear).
- Compliance with the operating pressure.
- Measurement equipment such as a pressure gauge or torque wrench must be calibrated and inspected at least once a year by an approved body, or failing this by the supplier or manufacturer.

- Make sure that the mounting equipment is suitable for to the type of installation. To use these devices the machine manufacturer's user manual.
- Observe the mounting direction for a directional tire.
- Lubricate the rim seats and tire beads with a suitable product.
- In the case of standard tube mounting (with inner tube), the size of the inner tube must correspond to that of the tire (section and diameter) and the rim must be in a condition to fit the inner tube without damaging it.



#### INFLATION & BALANCING

#### **INFLATION**

- Important note: only use inflation stations intended for this purpose. In no event should the operator remain in immediate proximity to the tire assembly. As a result, you must ensure that the compressed air pipe fixed to the valve is equipped with a safety clip and that it is of a sufficient length to allow the operator to move beyond any projection trajectories, in the event of an incident. Keep people not involved in the inflation operation away from the site where this is carried out.
- Remove the interior part of the valve.
- Start inflation and check the beads are correctly centred in relation to the edge of the rim
- If the beads are poorly centred, deflate and start the operation again in full, including lubrication.
- Continue to inflate to 3.5 bar in order to obtain correct bead placement. For higher pressures, use a protection cage when inflating the tire.

- Replace the valve interior and adjust the operating pressure.
- Install the polyamide cap with seal in order to ensure full leak-tightness.

#### BALANCING

- It is recommended the four tires be balanced for track use.
- The balancing machines must be calibrated in accordance with manufacturer instructions.
- Specific attention is to be paid to the mechanisms (cone/ screw plate) centring the assembly on the machine.





During storage and transport, the temperature must be higher than:

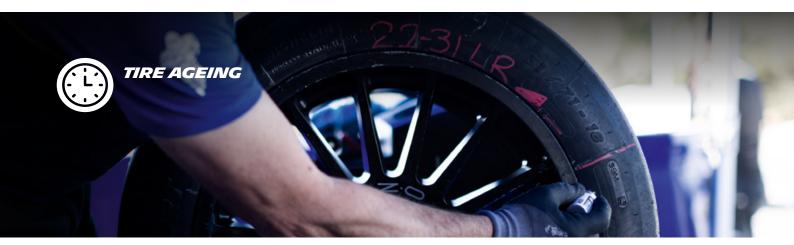
competition range Slick	temperature 10°C	temperature 15°C
Circuit, Hill Climb and Classic	Minimum storage	Minimum transport

Rally range	Minimum storage temperature	Minimum transport temperature
Asphalt rally	10°C	10°C
Gravel rally	10°C	10°C

Furthermore, tires must not be subject to:

- Direct and prolonged exposure to sunlight
- Sources of extreme heat and humidity (storage in tropical-type weather conditions)
- Solvents, lubricants, fuels and other chemicals
- Ozone emissions from equipment such as a transformer, welder, electric motor, etc.
- Long-term storage in a stack.

Non-compliance with these storage recommendations may significantly reduce the period over which the tire retains its performance. The storage location must be dry, ventilated, out of direct light and kept solely for tires. Racks allowing tires to be stored vertically are to be used in order to avoid tension on the casings.



- Tires age, even if they are not used, or if they are only used occasionally; excessive tire age can lead to a loss of grip.
- Remove tires from use when these show clear signs of ageing or wear (cracks in the rubber of the tread, shoulder or lower zone sidewall, deformations, etc.). If in doubt, refer to a tire professional.
- We recommend using Michelin Competition tires within a maximum of 24 months following their date of purchase (within 4 months in the event of storage in severe tropical- type conditions) or within 12 months for wet tires.



- Comply with the instructions for use provided by the manufacturers (tightening and rim compatibility, type of alloys, alignment).
- Systematically retighten the polyamide valve cap with seal (equipment necessary for correct heat resistance). This ensures the valve mechanism is protected and that the tire assembly is leak proof.
  - Ensure the valve is in good condition (no ovalisation, signs of impact, etc.).
  - Regularly check the tightening torques on screw valves.
  - Only use metal valves (track) or rubber valves (rally).



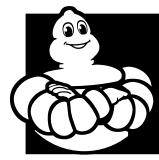
- Check tire pressure before every ride and correct the pressure if it no longer corresponds the operating pressure. Tire pressure should be checked when the tires are cold (tires that have not been driven or heated).
- Nitrogen inflation does not dispense with the need to check tire pressure regularly.
- In the event of an unusual loss of pressure, check the external and internal condition of the tire as well as the condition of the wheel and valve.
- Any punctures, cuts or visible deformation must be examined in detail by a tire professional. Never use a damaged or deformed tire or one that has run flat.



- Michelin Competition tires are for use on events on closed roads and not for non-competitive road use.
- > The integrity of a rally tire's construction is guaranteed for the wear or grip potential.
- > Non-compliance with certain recommendations (e.g. camber, tire pressures) may lead to tire degradation or performance fall-off (higher wear, poor car balance, understeer, oversteer).
- These recommendations do not cover unforeseen incidents such as punctures.



## **DISCOVER OUR RECOMMENDATIONS IN** REAL TIME WITH THE QR CODE BELOW



To stay updated of the latest recommendations available







IN THE EVENT OF USE OUTSIDE NORMAL CONDITIONS OF USE, CONTACT THE MICHELIN MOTORSPORT TECHNICAL DEPARTMENT.





36 rue du Clos Four 63100 Clermont-Ferrand • France 00 33 (0) 4 73 30 45 90

www.michelinmotorsport.com/fr/

