

**CLASSICTYRES**

**MICHELIN**



**MICHELIN**

## Tyre sizes and designations



tyre width  
in mm

Aspect ratio

"R"  
for Radial

Speed index  
VR > 210 km/h

Nominal  
rim diameter  
in inches

Tread pattern

Speed index  
270 km/h

**12\*45**

Nominal rim diameter in cm  
Cross-section width in cm

**125 \* 400**

Nominal rim diameter in mm  
Cross-section width in mm

**165 HR 15**

Nominal rim diameter in inches  
"R" for Radial  
Speed index H  
Cross-section width in mm

**205/70 VR 15**

Nominal rim diameter in inches  
"R" for Radial  
Speed index VR  
Aspect ratio (70 series)  
Cross-section width in mm

### Load indexes and speed codes

Most tyres include indications for use, such as the load index (number) and speed code (letter). The load index indicates the maximum load per tyre. The speed code indicates the maximum authorized speed of use.

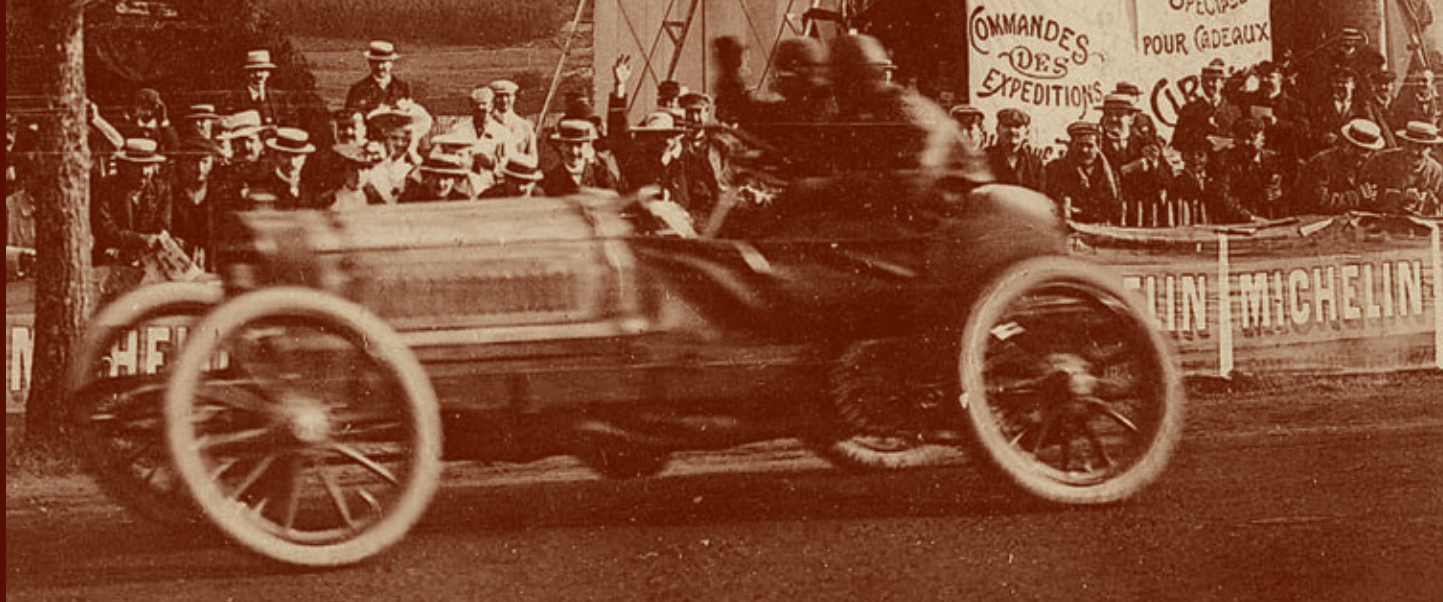
| Load index | Load per tyre (kg) | Load index | Load per tyre (kg) | Load index | Load per tyre (kg) | Load index | Load per tyre (kg) | Load index | Load per tyre (kg) | Speed index | Max speed |
|------------|--------------------|------------|--------------------|------------|--------------------|------------|--------------------|------------|--------------------|-------------|-----------|
| 62         | 265                | 75         | 387                | 88         | 560                | 101        | 825                | 114        | 1180               | J           | 100       |
| 63         | 272                | 76         | 400                | 89         | 580                | 102        | 850                | 115        | 1215               | K           | 110       |
| 64         | 280                | 77         | 412                | 90         | 600                | 103        | 875                | 116        | 1250               | L           | 120       |
| 65         | 290                | 78         | 425                | 91         | 615                | 104        | 900                | 117        | 1285               | M           | 130       |
| 66         | 300                | 79         | 437                | 92         | 630                | 105        | 925                | 118        | 1320               | N           | 140       |
| 67         | 307                | 80         | 450                | 93         | 650                | 106        | 950                | 119        | 1360               | P           | 150       |
| 68         | 315                | 81         | 462                | 94         | 670                | 107        | 975                | 120        | 1400               | Q           | 160       |
| 69         | 325                | 82         | 475                | 95         | 690                | 108        | 1000               | 121        | 1450               | R           | 170       |
| 70         | 335                | 83         | 487                | 96         | 710                | 109        | 1030               | 122        | 1500               | S           | 180       |
| 71         | 345                | 84         | 500                | 97         | 730                | 110        | 1060               | 123        | 1550               | T           | 190       |
| 72         | 355                | 85         | 515                | 98         | 750                | 111        | 1090               | 124        | 1600               | H           | 210       |
| 73         | 365                | 86         | 530                | 99         | 775                | 112        | 1120               | 125        | 1650               | V           | 240       |
| 74         | 375                | 87         | 545                | 100        | 800                | 113        | 1150               |            |                    | W           | 270       |
|            |                    |            |                    |            |                    |            |                    |            |                    | Y           | 300       |
|            |                    |            |                    |            |                    |            |                    |            |                    | VR          | >210      |
|            |                    |            |                    |            |                    |            |                    |            |                    | ZR          | >240      |

### Tube type and Tubeless

- **Tube type** : inner tube separate from the tyre.
- **Tubeless** : inner tube incorporated into the tyre. Requires a airtight wheel.

It is advisable to fit new Michelin tubes into new Michelin tube type tyres and also in tubeless tyres if the wheel is not suitable for tubeless fitments. It is essential that they are fitted correctly and especially important to avoid the possibility of trapping air between the tyre and the tube. To facilitate this the tube should always be lightly coated with French chalk and inflated slowly. The air between the tube and the tyre should be allowed to escape by depressing the valve into the valve hole. Michelin tyres of lower aspect ratio than 70% are not designed for use with tubes, no suitable tubes are produced and no attempt must be made to fit any tubes in these tyres.





## Authenticity and technological know-how

Michelin is today offering a range of tyres for classic cars to fit multiple vehicles released between the 1930s and the end of the last century.

### Michelin expertise...

Michelin's choice of continuous innovation and technological leadership can be found in this Classic range.

These tyres benefit from the developments made to rubber mixtures in terms of grip. However, the dynamic characteristics of these tyres remain the most appropriate in association with those of period vehicles. Manufactured in small runs, often by hand, these tyres call on the technical skills and know-how of the best craftsmen.

### ... in accordance with the standards of the time

The technological excellence of this range goes hand in hand with the historic authenticity of the vehicles. These tyres exactly reproduce the model's configuration of the period, in terms of dimension, tread and aspect, thus protecting the period vehicle from any anachronisms.

As a result, in offering you a tyre that is both safe and respectful of historic accuracy, Michelin intends to make its contribution to saving, promoting and conserving automotive heritage.

### Future classics

With the "future classic" movement, which offers the possibility of rediscovering the cars of the 1980s, Michelin is developing tyre ranges with performances that now allow for enjoying all the sensations of these cars that are so full of character. They still have a lot of driving pleasure to offer you!

### White Wall

At the request of many classic car owners, seeking tyres that combine grip, long life and elegance, Michelin Classic is now offering 10 dimensions with white walls or trim, that can be fitted to many prestigious or popular models. Michelin is now offering these long-awaited tyres, which have of course adopted more modern rubbers, and which add a subtle touch of elegance to your classic car.

**You can see the availability of our products on our website:**  
[classic.michelin.com](http://classic.michelin.com)



***Tyres intended for fitting to classic cars. F.I.V.A. definition of a classic car:***

- *at least 30 years old,*
- *preserved and maintained in a historically accurate condition,*
- *not used as an everyday means of transport,*
- *and which, as a result, forms part of our technical and cultural heritage.*



## *Cross-ply tyres with bead wires*

Taking over from beaded edge tyres, Cross-ply tyres with bead wires constitute the second generation of detachable tyres. These tyres benefit from two major innovations: the introduction of carbon black and the appearance of textile cords in the tyre casing.

### **Increased longevity**

The integration of bead wires into the rubber beads, in 1925, allowed for improving the tyre's hold on its rim. These tyres also benefit from two major innovations from before their creation:

- the introduction of carbon black as of 1917, which increases tyre lifespan by a factor of five
- the appearance, in the tyre casing, of textile cord plies parallel to each other, which gave rise to a so-called "corded" tyre in 1919, and the "comfort corded" in 1923, the first low pressure car tyre (2.5 bar).

We currently market two products in the Cross-ply tyre category (with bead wires):

### **DOUBLE RIVET**

"Double rivet" is in fact the name of a tread that was created with the first generation of car tyres, beaded edge tyres. This profile was retained for the first tyres with bead wires in 1925; it was a truly revolutionary era.

### **SUPERCONFORT**

Resulting from research that, at the time, allowed for obtaining even lower pressures and much slower wear, in 1932 Michelin offered a very low-pressure tyre, the "Superconfort". In 1935, the "Superconfort Stop S" was launched, the first tyre with a high number of sipes in the tread, designed especially for wet roads. At the time, Michelin was the only manufacturer to know how to produce this type of tyre with the famous "zigzag" wavy sipes, which greatly improved safety thanks to the excellent grip they offered. As its name indicates, the "Superconfort Stop S" tyre offered exceptional comfort in addition to its road performance.



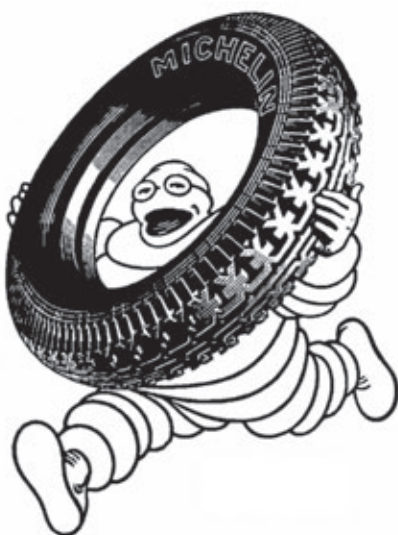
DOUBLE RIVET



SUPERCONFORT

### Conventional (or diagonal ply) tyres

| Seat | Dimension           | Tread | cross-section width (mm) | External diameter (mm) | Tread circumference (mm) | Pressure per tyre in Bar/Load in kg |      |      |      | Inner tube             |
|------|---------------------|-------|--------------------------|------------------------|--------------------------|-------------------------------------|------|------|------|------------------------|
|      |                     |       |                          |                        |                          | 2b                                  | 2,5b | 3,0b | 3,5b |                        |
| 40   | 130/140 - 40        | SCSS  | 165                      | 722                    | 2150                     | 422                                 | 504  | 583  | 660  | 16 E 13                |
|      | 150/140 - 40        | SCSS  | 175                      | 733                    | 2180                     | 452                                 | 541  | 626  | 708  | 16 F Ret               |
| 17   | 6,50/7,00 - 17      | DR    | 194                      | 193                    | 2367                     | 566                                 | 677  | 783  | 668  | 17/18 H Ret            |
| 45   | 12 - 45             | DR    | 143                      | 730                    | 2175                     | 328                                 | 392  | 453  | 513  | 18 C Ret               |
|      | 13 - 45             | DR    | 149                      | 740                    | 2205                     | 347                                 | 415  | 480  | 543  | 18 C Ret               |
|      | 14 - 45             | DR    | 154                      | 740                    | 2205                     | 356                                 | 426  | 493  | 557  | 18 C Ret               |
|      | 15/16 - 45          | DR    | 184                      | 799                    | 2382                     | 511                                 | 610  | 706  | 797  | 18 C Ret               |
| 18   | 4,75/5,25 - 18      | DR    | 147                      | 745                    | 2160                     | 331                                 | 396  | 458  | 513  | 17/18 E Ret            |
|      | 5,50 - 18           | DR    | 156                      | 762                    | 2290                     | 425                                 | 508  | 587  | 660  | 17/18 E Ret            |
|      | 6,00/6,50 - 18      | DR    | 178                      | 798                    | 2362                     | 511                                 | 610  | 706  | 797  | 17/18 H Ret            |
| 19   | 4,00/4,50 - 19      | DR    | 128                      | 738                    | 2214                     | 283                                 | 338  | 391  | 422  | 18/19 CD Ret or 19 UHD |
|      | 4,75/5,00 - 19      | DR    | 141                      | 766                    | 2304                     | 353                                 | 422  | 489  | 550  | 18/19 CD Ret or 19 UHD |
|      | 5,25/6,00 - 19      | DR    | 168                      | 807                    | 2400                     | 444                                 | 531  | 614  | 708  | 19/20 H Ret or 20 H    |
| 20   | 6,50/7,00 - 20      | DR    | 194                      | 866                    | 2550                     | 585                                 | 700  | 810  | 916  | 19/20 H Ret or 20 H    |
| 21   | 5,50/6,00 - 21      | DR    | 175                      | 861                    | 2510                     | 499                                 | 597  | 690  | 781  | 19/20 H Ret or 20 H    |
|      | 7,00 - 21 (33-6,75) | DR    | 200                      | 907                    | 2660                     | 658                                 | 786  | 909  | 1029 | 19/20 H Ret or 20 H    |



### Inflation pressures for conventional tyres

#### Normal use

- The maximum speed is 150 kph.
- The pressure of use must be between 2 and 3.5 bar.
- For optimum use of your tyres when on your vehicle, select the pressure corresponding to the actual load per tyre (vehicle fully loaded).

#### Special use

For any use at a speed, load or pressure beyond the above framework, contact our technical services: [pneuretro@michelin.com](mailto:pneuretro@michelin.com)





MICHELIN X



MICHELIN ZX



MICHELIN XZX



MICHELIN X M+S 89



MICHELIN MX

## The revolution!

### A revolutionary structure for unequalled performances...

With the radial ply X tyre, Michelin set off to conquer the world with a considerable advantage. Its structure, revolutionary for the period, thus allowed for differentiating between the ways the sidewall and the crown function.

### Michelin innovation

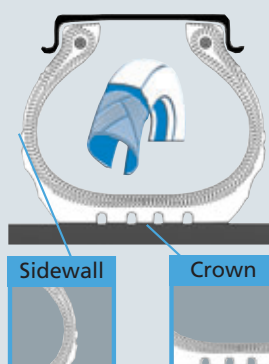
The first major Michelin innovation, the radial ply tyre, was first marketed under the "X" label in 1949. At this time, Lancia was the first constructor to adopt the X as an original fitting on its Aurelia model. As of 1955, radial technology broke free and most European constructors chose this solution. The X was thus fitted to different types of car: from the original and popular 2CV or Beetle to the fascinating Mercedes 190SL or Facel Vega.

### Radial technology

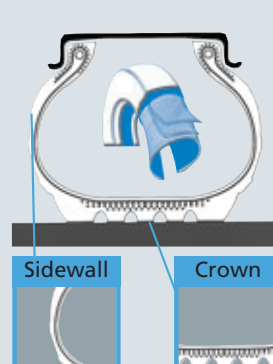
The benefits of the radial tyre compared to the Cross-ply tyre can be seen in every area: greater safety (road holding, grip, braking), economies of use (mileage return doubled, significant reduction in fuel consumption), greater comfort thanks to the sidewall flexibility. In the 1950s, the superiority of the X tyre was such that numerous racing drivers adopted them despite Michelin not being the official partner of any race series.

## Technical information

### Cross-ply



### Radial





MICHELIN PILOTE X



## X and developments

| Seat<br>(Inches or mm) | Dimension   | Tread    | TT or TL | Load index/<br>Speed index | Cross-section<br>width (mm) | External diameter<br>(mm) | Tread<br>circumference<br>(mm) | Rim: (min.,<br>measured, max.) | Inner tube |
|------------------------|-------------|----------|----------|----------------------------|-----------------------------|---------------------------|--------------------------------|--------------------------------|------------|
| 12                     | 125 R 12    | X        | TL       | 62 S                       | 132                         | 518                       | 1555                           | 3,0 3,5 4,0                    | 12 C 13    |
|                        | 145 R 12    | MX       | TL       | 72 S                       | 153                         | 551                       | 1650                           | 3,5 4,0 5,0                    | 12 CG 13   |
|                        | 145/70 R 12 | XZX      | TL       | 69 S                       | 156                         | 520                       | 1552                           | 4,0 4,5 5,0                    | 12 CG 13   |
| 13                     | 6,40 SR 13  | ZX       | TT       | 87 S                       | 177                         | 642                       | 1952                           | 4,0 4,5 5,5                    | 13 F 13    |
|                        | 7,25 R 13   | X        | TT       | 90 S                       | 180                         | 654                       | 1988                           | 5,0 5,5 6,0                    | 13 F 13    |
| 14                     | 155 R 14    | X        | TL       | 80 T                       | 157                         | 604                       | 1831                           | 4,0 4,5-5,0                    | 14 D 13    |
| 15                     | 125 R 15    | X        | TL       | 68 S                       | 127                         | 598                       | 1818                           | 3,0 3,5-4,0                    | 15 CB 13   |
|                        | 135 SR 15   | ZX       | TL       | 72 S                       | 137                         | 600                       | 1821                           | 3,5 4,0 4,5                    | 15 CB 13   |
|                        | 135 R 15    | M+S 89   | TL       | 72 Q                       | 137                         | 600                       | 1821                           | 3,5 4,0 4,5                    | 15 CB 13   |
|                        | 145 R 15    | XZX      | TL       | 78 S                       | 147                         | 616                       | 1873                           | 3,5 4,0 5,0                    | 15 E 13    |
|                        | 155 R 15    | X        | TL       | 82 T                       | 157                         | 630                       | 1910                           | 4,0 4,5 5,0                    | 15 E 13    |
|                        | 165 SR 15   | XZX      | TL       | 86 S                       | 167                         | 646                       | 1967                           | 4,0 4,5 5,5                    | 15 E 13    |
| 400                    | 125 R 400   | X        | TT       | 69 S                       | 130                         | 619                       | 1882                           | 125 135                        | 16 C 13    |
|                        | 135 R 400   | X        | TT       | 73 S                       | 138                         | 631                       | 1918                           | 125 135 145                    | 16 C 13    |
|                        | 145 R 400   | X        | TT       | 79 S                       | 142                         | 649                       | 1973                           | 145 155                        | 16 E 13    |
|                        | 155 R 400   | X        | TT       | 83 S                       | 150                         | 660                       | 2006                           | 145 155 165                    | 16 E 13    |
|                        | 165 R 400   | X        | TT       | 87 S                       | 162                         | 677                       | 2059                           | 155 165 185                    | 16 F Ret   |
|                        | 185 R 400   | X        | TT       | 91 S                       | 185                         | 707                       | 2149                           | 165 185                        | 16 F Ret   |
| 16                     | 5,50 R 16   | X        | TT       | 84 H                       | 172                         | 690                       | 2088                           | 4,5 5,0 6,0                    | 16 F Ret   |
|                        | 185 R 16    | X        | TT       | 92 S                       | 180                         | 707                       | 2139                           | 4,0 5,5 6,0                    | 16 F Ret   |
|                        | 6,00 R 16   | Pilote X | TT       | 88 W                       | 190                         | 708                       | 2152                           | 4,0 4,5 5,5                    | 16 F Ret   |

**Cross-ply :** this cross cut shows the huge construction of the cross-ply tyre. From bead wire to bead wire, (at least) four layers of textile plies are built up from sidewall to crown and back down the other sidewall. No difference is made between the sidewalls and crown. The details show the cord overlay. These therefore form a thick mass containing multiple interlayers that represent just as many friction zones. One consequence is the appearance of shear movements. The longitudinal cut shown on the bottom left shows the shear possible between the overlaid plies.

**Radial :** we easily see the evolution of the sidewall and crown functions. The sidewalls are formed from a single textile ply. They are therefore no longer affected by the shear phenomenon. The textile ply, like the rubber layer surrounding it, is thin and thus flexible. The high degree of sidewall flexibility generates comfort and energy savings. The crown itself is rendered rigid by the triangulation effect procured by combining the casing ply with the two layers of steel cord plies (3 for the X tyre). The crown rigidity reduces tyre wear and improves road holding.



## *Driving precision*

Launched in 1965, the XAS remained the reference tyre until the end of the 1970s. The first tyre with an asymmetrical tread, the inner and outer sides of the XAS work differently in order to ensure good vehicle balance.

### **Asymmetrical Tread Pattern**

Michelin progressed even more in differentiating between the elements making up the tyre, by creating the XAS, the first tyre with an asymmetrical tread. The XAS was constructed taking into consideration the distinct work of the shoulders, the side walls and the various parts of the crown, depending on whether these are on the inner or outer side of the car. Just as human feet are asymmetrical, the inner and outer sides of a tyre work differently in order to ensure the car has good balance and easy forward motion.

### **Exceptional handling performance**

This major progression allowed the XAS tyre to provide:

- remarkable stability,
- exceptional road holding when cornering
- grip under all circumstances, which was previously unknown.

The first standard tyre designed to run at 210 kph, its exceptional performances naturally saw the XAS destined for competition use, Forumula France as of 1968, track competitions, rallies and hillclimbs.

### ***White wall and white trim tyres***

At the request of many classic car owners, seeking tyres that combine grip, long life and elegance, Michelin Classic is now offering 10 dimensions with white walls or trim, that can be fitted to many prestigious or popular classic vehicles fitted with 12 to 15 inch rims.

Models from the 1950s and 60s were often displayed at car shows with these distinctive tyres. The return to the market by these long-awaited tyres, which have of course adopted more modern rubbers, will add a subtle touch of elegance to your classic car.

However, you will need to maintain the sidewalls in order to preserve their shine as time passes: several specific products are available especially for this purpose; our specialist Classic Car dealers will be able to advise you on how to procure these.





MICHELIN XAS



MICHELIN XVS



MICHELIN MXV



WHITE WALL & WHITE TRIM TYRES

## XAS and developments

| Seat<br>(Inches or mm) | Dimension    | Tread     | TT or TL | Load index /<br>Speed index | cross-section<br>width (mm) | External<br>diameter (mm) | Tread circumfe-<br>rence (mm) | Rim: (min.,<br>measured, max.) | Inner tube |
|------------------------|--------------|-----------|----------|-----------------------------|-----------------------------|---------------------------|-------------------------------|--------------------------------|------------|
| 13                     | 145 HR 13    | XAS FF    | TL       | 74 H                        | 147                         | 565                       | 1175                          | 3,5 4 5                        | 13 CG 13   |
|                        | 155 HR 13    | XAS FF    | TL       | 78 H                        | 157                         | 582                       | 1775                          | 4,0 4,5 5,5                    | 13 D 13    |
|                        | 165 HR 13    | XAS et FF | TL       | 82 H                        | 167                         | 600                       | 1824                          | 4,0 4,5 5,5                    | 13 D 13    |
|                        | 185 HR 13    | XAS FF    | TL       | 88 H                        | 186                         | 625                       | 1906                          | 4,5 5,5 6,5                    | 13 F 13    |
| 14                     | 165 HR 14    | XAS       | TT       | 84 H                        | 167                         | 626                       | 1903                          | 4,0 4,5 5,5                    | 14 D 13    |
|                        | 175 HR 14    | XAS       | TL       | 88 H                        | 178                         | 634                       | 1927                          | 4,5 5,0 6,0                    | 14 E 13    |
|                        | 185 HR 14    | MXV-P     | TL       | 90 H                        | 188                         | 650                       | 1976                          | 4,5 5,5 6,5                    | 14 F 13    |
|                        | 185/70 VR 14 | XAS       | TL       | 88 V                        | 189                         | 616                       | 1867                          | 4,5 5,5 6,0                    | 14 E 13    |
| 15                     | 155 HR 15    | XAS FF    | TL       | 82 H                        | 157                         | 630                       | 1915                          | 4,0 4,5 5,0                    | 15 E 13    |
|                        | 155 HR 15    | XAS       | TT       | 82 H                        | 157                         | 630                       | 1915                          | 4,0 4,5 5,0                    | 15 E 13    |
|                        | 165 VR 15    | XAS NO    | TL       | 86 V                        | 167                         | 646                       | 1964                          | 4,0 4,5 5,5                    | 15 E 13    |
|                        | 180 HR 15    | XAS       | TT       | 89 H                        | 175                         | 680                       | 2067                          | 4,5 5,0 5,5                    | 15 E 13    |
|                        | 185 HR 15    | XVS-P     | TL       | 93 H                        | 188                         | 674                       | 2049                          | 4,5 5,5 6,0                    | 15 F 13    |
|                        | 185 VR 15    | XVS       | TL       | 93 V                        | 186                         | 675                       | 2059                          | 4,5 5,5 6,0                    | 15 F 13    |
|                        | 235/70 HR 15 | XVS       | TL       | 101 H                       | 234                         | 711                       | 2155                          | 6,5 7,0 8,5                    | 15 J 13    |

## White wall and white trim tyres

| Description               | Cross-section width<br>(mm) | External diameter<br>(mm) | Tread circumference<br>(mm) | Rim: (min.,<br>measured, max.)<br>in inches | White wall width<br>(mm) | Inner tubes |
|---------------------------|-----------------------------|---------------------------|-----------------------------|---|--------------------------|-------------|
| 125 R12 62S TL X FB       | 127                         | 518                       | 1555                        | 3.0 3.5 4.0                                 | 19,5                     | 12 C 13     |
| 6.40 R13 87S TT ZX FB     | 179                         | 642                       | 1952                        | 4.0 4.5 5.5                                 | 48                       | 13 F 13     |
| 7.25 R13 90S TT X FB      | 182                         | 654                       | 1988                        | 5.0 5.5 6.0                                 | 50                       | 13 F 13     |
| 185 R14 90H TL MXV FB     | 194                         | 650                       | 1976                        | 4.5 5.5 6.5                                 | 20                       | 14 F 13     |
| 125 R15 68S TL X FB       | 126                         | 598                       | 1818                        | 3.0 3.5 4.0                                 | 27                       | 15 CB 13    |
| 165 R15 86S TL XZX FB     | 164                         | 646                       | 1967                        | 4.0 4.5 5.5                                 | 27,5                     | 15 E 13     |
| 180 R15 89H TT XAS FB     | 176                         | 680                       | 2067                        | 4.5 5.0 5.5                                 | 44,5                     | 15 E 13     |
| 185 R15 93H TL XVS FB     | 185                         | 674                       | 2049                        | 4.5 5.5 6.0                                 | 37,5                     | 15 F 13     |
| 235/70 R15 101H TL XVS FB | 236                         | 711                       | 2155                        | 6.5 7.0 8.5                                 | 20                       | 15 J 13     |
| 165 R400 87S TT X FB      | 163                         | 677                       | 2059                        | 155 165 185                                 | 50                       | 16 F RET    |



MICHELIN XWX



MICHELIN XDX-B



MICHELIN MXW



MICHELIN TRX-B

## Go beyond the limits

The only radial tyre capable of equipping the fastest cars in the world in the 1970s, the XWX provided these vehicles with exceptional road holding and remarkable grip.

### A construction designed to reach 300 kph

The specific features of the XWX allowed it to achieve remarkable performances, combining speed, driving comfort and safety. The original design of its internal construction together with the flexibility of the casing offer exceptional comfort while driving at very high speeds. A VR-category tyre, the XWX can be used above 210 Kph, with a maximum usage speed of 270 Kph.

### Dream cars

At the end of the 1960s, Germany and Italy were at the forefront of the European motorway development programme. They were also the main producers of cars which could reach speeds in excess of 200 Kph. The wide tarmac roads and no speed limits offered a happy privileged few the option of using the performances of these "supercars" at speeds that would be shameful today. The Lamborghini Miura (1966), Ferrari 365 (1965), Maserati Ghibli (1966), De Tomaso Pantera (1970) and Porsche 911 Carrera RS (1972) were the uncontested kings of the road, but the large German saloons like the: Mercedes 300 SE 6.3 I (1968) and BMW 3.0 Si (1971) were also making a strong impression. The French were also present with the Citroën SM (1970), as were the English with the famous Jaguar E-type V12 (1970) and Aston Martin DBS (1967).

### TRX: The first "low profile" tyre

Michelin's invention of the TRX in 1975 allowed for more-balanced stress distribution in the entire tyre casing, hence the name TR for "tension répartie" (literally, distributed stress). The TRX notably distinguished itself in F1 with Renault and Prost, and in the world rally championship on the Audi Quattro, 205 Turbo, and R5 Turbo.

### The result of in-depth research...

For the first time, the tyre and its rim complemented one another perfectly, working together as a single unit. The rim therefore underwent a fundamental transformation, the essential characteristic of which was a flatter, lower flange. This new design of the rim and the bead of the tyre resulted in a gradual curvature of the casing without the "S" shaped flexing inherent in traditional designs.

### ...for real directional control

Thanks to this innovative construction, the TRX tyre offers better directional stability and is a major contributor to the vehicle's active safety, due to excellent handling close to the limit, especially when cornering.

- Remarkable grip thanks to ideal pressure distribution in the contact patch.
- Excellent comfort due to the increase in the effective flexing zone.
- New look for the tyre/wheel assembly and the heavily sculpted tread pattern.



MICHELIN TRX GT-B



## XWX and developments

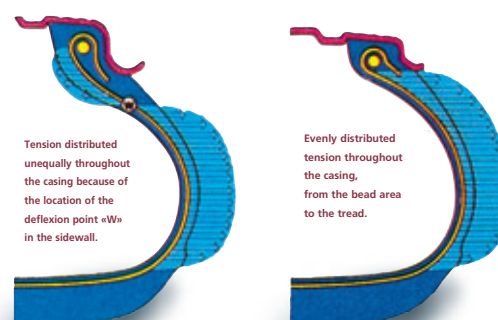
| Seat<br>(Inches or mm) | Dimension    | Tread | TT or TL | Load index /<br>Speed index | cross-section<br>width (mm) | External<br>diameter (mm) | Tread<br>circumference<br>(mm) | Rim: (min.,<br>measured, max.) | Inner tube |
|------------------------|--------------|-------|----------|-----------------------------|-----------------------------|---------------------------|--------------------------------|--------------------------------|------------|
| 13                     | 185/70 VR 13 | XDX-B | TL       | 86 V                        | 189                         | 590                       | 1815                           | 5,0 5,5 6,5                    | 13 E 13    |
|                        | 205/70 VR 13 | XDX-B | TL       | 91 V                        | 209                         | 618                       | 1879                           | 5,5 6,0 7,5                    | 13 F 13    |
| 14                     | 205 VR 14    | XWX   | TL       | 89 W                        | 208                         | 686                       | 2085                           | 5,0 5,5 7,5                    | 14 F 13    |
|                        | 205/70 VR 14 | XWX   | TL       | 89 W                        | 209                         | 644                       | 1958                           | 5,5 6,0 7,5                    | 14 F 13    |
|                        | 215/70 VR 14 | XWX   | TL       | 92 W                        | 221                         | 658                       | 2000                           | 6,0 6,5 7,5                    | 14 F 13    |
| 15                     | 185/70 VR 15 | XWX   | TL       | 89 V                        | 189                         | 641                       | 1949                           | 5,0 5,5 6,5                    | 15 E 13    |
|                        | 205/70 VR 15 | XWX   | TL       | 90 W                        | 209                         | 669                       | 2034                           | 5,5 6,0 7,5                    | 15 F 13    |
|                        | 215/70 VR 15 | XWX   | TL       | 90 W                        | 221                         | 683                       | 2076                           | 6,0 6,5 7,5                    | 15 F 13    |
|                        | 225/70 VR 15 | XWX   | TL       | 92 W                        | 228                         | 697                       | 2140                           | 6,0 8,0                        | 15 J 13    |
|                        | 255/45 VR 15 | MXW   | TL       | 93 W                        | 255                         | 611                       | 1875                           | 8,5 10,0                       | none       |

## TRX

| Seat<br>(Inches or mm) | Dimension     | Tread    | TT or TL | Load index /<br>Speed index | cross-section<br>width (mm) | External<br>diameter (mm) | Tread<br>circumference<br>(mm) | Rim: (min.,<br>measured, max.) | Inner tube |
|------------------------|---------------|----------|----------|-----------------------------|-----------------------------|---------------------------|--------------------------------|--------------------------------|------------|
| 340                    | 190/55 VR 340 | TRX - B  | TL       | 81 V                        | 191                         | 550                       | 1672                           | 120TR 135TR 165TR              | none       |
| 365                    | 220/55 VR 365 | TRX - B  | TL       | 92 V                        | 218                         | 607                       | 1845                           | 135TR 150TR 180TR              | none       |
| 390                    | 190/65 HR 390 | TRX - B  | TL       | 89 H                        | 191                         | 638                       | 1945                           | 120TR 135TR 165TR              | none       |
|                        | 210/55 VR 390 | TRX - B  | TL       | 91 V                        | 219                         | 631                       | 1918                           | 135TR 150TR 180TR              | none       |
|                        | 220/55 VR 390 | TRX - B  | TL       | 88 W                        | 227                         | 642                       | 1952                           | 135TR 150TR 180TR              | none       |
|                        | 200/60 VR 390 | TRX - B  | TL       | 90 V                        | 206                         | 640                       | 1946                           | 120TR 135TR 165TR              | none       |
|                        | 240/55 VR 390 | TRX - B  | TL       | 89 W                        | 239                         | 654                       | 1988                           | 150TR 165TR 195TR              | none       |
| 415                    | 240/45 VR 415 | TRX GT-B | TL       | 94 W                        | 253                         | 640                       | 1925                           | 195TR 210TR 225TR              | none       |
|                        | 240/55 VR 415 | TRX - B  | TL       | 94 W                        | 239                         | 679                       | 2064                           | 150TR 165TR 195TR              | none       |

## TRX, the Stress-Distribution radial tyre

presents a new stage in the development of the radial technology: the tyre and the rim are designed together and adapted to the vehicle's specific requirements. This new tyre allowed for reconciling two contradictory requirements: greater comfort (the advantage of high and flexible sidewalls) and greater driving precision (the advantage of low and stiff sidewalls).







## Modern classics

### MICHELIN Pilot Exalto PE2, ideal for the GTI

In the early 2000s, the MICHELIN Pilot Exalto PE2 tyre was born. Backed by the brand's experience in competition, and seeking to provide a higher level of performance, this tyre initiated an asymmetrical tread with a variable contact patch, where the footprint increased when cornering. A favourite among sporting drivers, it has remained memorable for its precision and endurance. The MICHELIN Pilot Exalto PE2 tyre has been reborn 20 years later, in some previously unseen dimensions. It has been modernised in order to meet current safety standards, without modifying its design and performance characteristics. After numerous tests, carried out on future classic models to validate its performance criteria's, the MICHELIN Pilot Exalto PE2 is the perfect tyre for sports and roadster cars. Thanks to

the use of optimised rubber mixtures and casings, this range responds perfectly to current environmental and safety standards.

### MICHELIN Primacy, intended for saloons.

The MICHELIN Primacy 3 tyre, a blend of safety, comfort and long life, is a logical choice for those who want to travel long distances in complete tranquillity. Thanks to the self-locking sipes, it offers a communicative contact with the road. Available with high load and speed indices, the MICHELIN Primacy 3 tyre can be fitted to a wide range of vehicles in the three dimensions selected, which have become very difficult to find with the performance indices which allow them to be fitted to high powered saloon cars.

| Seat | Dimension       | Tread            | TL | Load index<br>Speed index | cross-section<br>width (mm) | External<br>diameter (mm) | Tread<br>circumference<br>(mm) | Rim (min.,<br>measured,<br>max.) | Fuel efficiency<br>(from A to G) | Grip on wet<br>ground<br>(from A to G) | Exterior driving<br>noise classification<br>(from A to C) |
|------|-----------------|------------------|----|---------------------------|-----------------------------|---------------------------|--------------------------------|----------------------------------|----------------------------------|--|---|
| 13   | 175/65 R13 80T  | PILOT EXALTO PE2 | TL | 80T                       | 182                         | 553                       | 1738                           | 5,0 5,0 6,0                      | D                                | A                                      | B   |
|      | 175/60 R13 77H  | PILOT EXALTO PE2 | TL | 77H                       | 176                         | 540                       | 1697                           | 5,0 5,0 6,0                      | D                                | A                                      | B   |
|      | 185/60 R13 80H  | PILOT EXALTO PE2 | TL | 80H                       | 185                         | 553                       | 1738                           | 5,0 6,0 6,5                      | D                                | A                                      | B   |
|      | 195/55 R13 80V  | PILOT EXALTO PE2 | TL | 80V                       | 195                         | 542                       | 1702                           | 5,5 6,5 7,0                      | D                                | A                                      | B   |
| 14   | 165/60 R14 75H  | PILOT EXALTO PE2 | TL | 75H                       | 175                         | 557                       | 1751                           | 4,5 5,0 6,0                      | D                                | A                                      | B   |
|      | 175/60 R14 79H  | PILOT EXALTO PE2 | TL | 79H                       | 177                         | 562                       | 1765                           | 5,0 5,0 6,0                      | D                                | A                                      | B   |
|      | 185/60 R14 82V  | PILOT EXALTO PE2 | TL | 82V                       | 186                         | 576                       | 1809                           | 5,0 5,5 6,0                      | D                                | A                                      | B   |
|      | 185/55 R14 82V  | PILOT EXALTO PE2 | TL | 82V                       | 185                         | 561                       | 1762                           | 5,0 6,0 6,5                      | D                                | A                                      | B   |
| 15   | 185/55 R15 82V  | PILOT EXALTO PE2 | TL | 82V                       | 195                         | 589                       | 1850                           | 5,0 6,0 6,5                      | D                                | A                                      | B   |
|      | 195/50 R15 82V  | PILOT EXALTO PE2 | TL | 82V                       | 195                         | 580                       | 1822                           | 5,5 6,0 7,0                      | D                                | A                                      | B   |
|      | 195/55 R15 85V  | PILOT EXALTO PE2 | TL | 88V                       | 194                         | 589                       | 1815                           | 5,5 6,0 7,0                      | D                                | A                                      | B   |
|      | 195/60 R15 88V  | PRIMACY 3        | TL | 88V                       | 205                         | 621                       | 1952                           | 5,5 6,0 7,0                      | C                                | A                                      | B   |
|      | 205/60 R15 91W  | PRIMACY 3        | TL | 91W                       | 205                         | 621                       | 1952                           | 5,5 6,0 7,5                      | C                                | A                                      | B   |
| 16   | 235/60 R16 100W | PRIMACY 3        | TL | 100W                      | 233                         | 682                       | 2143                           | 6,5 7,0 8,5                      | C                                | A                                      | B   |

Regulation 2020/740



MICHELIN SX MXX3



MICHELIN MXV3-A



MICHELIN PRIMACY 3



MICHELIN PILOT EXALTO 2

PILOT SPORT

PS2



### MXV3-A , Pilot Sport , SX MXX3 , PS2

| Seat<br>(Pouces or mm) | Dimension    | Tread       | TT or TL | Load index<br>Speed index | Cross-section<br>width (mm) | External<br>diameter (mm) | Tread<br>circumference<br>(mm) | Rim:<br>(min., measured, max.) | Inner tube |
|------------------------|--------------|-------------|----------|---------------------------|-----------------------------|---------------------------|--------------------------------|--------------------------------|------------|
| 14                     | 195/60 VR 14 | MXV3-A      | TL       | 86 V                      | 201                         | 590                       | 1789                           | 5,5 6,0 7,0                    | none       |
|                        | 195/65 VR 14 | MXV3-A      | TL       | 89 V                      | 201                         | 610                       | 1849                           | 5,5 6,0 7,0                    | none       |
| 16                     | 225/50 ZR 16 | Pilot Sport | TL       | 92 Y                      | 242                         | 642                       | 1928                           | 6,0 7,0 8,0                    | none       |
|                        | 255/50 ZR 16 | Pilot Sport | TL       | 99 Y                      | 276                         | 672                       | 2019                           | 7,0 8,0 9,0                    | none       |
|                        | 205/55 ZR 16 | SX MXX3     | TL       | 91 Y                      | 223                         | 642                       | 1928                           | 5,5 6,5 7,5                    | none       |
|                        | 245/45 ZR 16 | SX MXX3     | TL       | 94 Y                      | 253                         | 634                       | 1909                           | 7,5 8,0 9,0                    | none       |
| 17                     | 275/40 ZR 17 | PS2         | TL       | 98 Y                      | 277                         | 652                       | 1989                           | 9,0 9,5 11,0                   | none       |
|                        | 335/35 ZR 17 | PS2         | TL       | 106 Y                     | 343                         | 666                       | 2031                           | 11,0 12,0 13,0                 | none       |

XM + S 244



### XM + S 244

| Seat<br>(Inches or mm) | Dimension | Tread      | TT or TL | Load index<br>Speed index | cross-section<br>width (mm) | External<br>diameter (mm) | Tread<br>circumference<br>(mm) | Rim: (min.,<br>measured, max.) | Inner tube |
|------------------------|-----------|------------|----------|---------------------------|-----------------------------|---------------------------|--------------------------------|--------------------------------|------------|
| 16                     | 205 R 16  | XM + S 244 | TL       | 104 T                     | 203                         | 736                       | 2312                           | 5,0 - 5,5 - 7,0                | 15/17 H 13 |

At the request of many owners of now-classic 4x4s, Michelin is reintroducing its iconic studdable XM+S 244 tyre, in its 205 R 16 dimension, for fitting to the Range Rover, Mercedes G-Class and Toyota Land Cruiser.

# TUBETYPE

| Tyre dimensions   | Tube dimensions            | Valve  |
|---|----------------------------|--|
| 700-80 / 700-85 / 710-90  | 710-90 RET 2030            | <b>Straight</b><br><br>2030      R 2005<br>Wooden wheels      Steel wheels   |
| 750-85 / 760-90   | 760-90 RET 2030            |  |
| 765-105 / 820-120 / 775-145<br>815-105                                    | 820-120 RET 2030<br>R 2005 |  |
| 880-120 / 935-135 / 895-135 / 835-135<br>33-4 / 32-4,5 / 33-5             | 880-120 RET 2030<br>R 2005 |  |
| 715-115 / 720-120 / 730-130 /<br>11-45 / 12-45 / 13-45 / 14-45 / 15/16-45 | 18 C RET                   |  |
| 150/160X40 / 165 et 185-400 / 5,50 et 6,00-16                             | 16 F RET                   | <b>Right angle</b><br><br>Michelin valve reference 1466<br>+ elbow extension reference 1197<br>(delivered with the tube) |
| 4,5 à 600-17 / 5,50-18  | 17/18 E RET                |  |
| 715-115 / 720-120 / 730-130 / 11 à 16-45 4,00/5,00-19                     | 18/19 CD RET               | <b>Offset</b><br><br>Valve reference ETRTO-V2-01-1<br>Michelin valve reference 746                                       |
| 6,50/7,00-17 / 6,00/6,50/7,00-18  | 17/18 H RET                |  |
| 4,50 à 5,50-20 / 4,40/5,50-21   | 20/21 CD RET               |  |
| 5,00 à 7,00-21 / 5,00 à 7,00-19   | 19/20 H RET                |  |
| 775-145 / 15/16/17-50   |                            |  |





# Safety advice. Using Classic Car tyres. Michelin Group

## 1) - Introduction:

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

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

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

Use on banking circuits requires specific tyres and/or conditions of use. Before any use, contact the Michelin technical service at [pneuretro@michelin.com](mailto:pneuretro@michelin.com) Information available on our websites ([classic.michelin.com](http://classic.michelin.com) & [michelinmotorsport.com](http://michelinmotorsport.com))

## 2) - Recommendations:

Pre-use verification rule

- The tyre choice must comply with the vehicle's fittings, as defined by this vehicle's manufacturer and constructor.
- Ensure that the tyres on the same axle are of the same type (brand, trade name or industrial reference, dimensions, structure).

Prior to fitting, ensure:

- That the rim diameter corresponds exactly to the internal diameter of the tyre.
- That the rim width complies with the manufacturer's recommendation or failing that with listed standards (ETRTO, TRA, JATMA, etc.).
- That the rim type (tubeless, tube type) corresponds to the tyre type.
- That the rim is in good condition and is not showing any deterioration (crack, deformation, etc.), and that the valves are in good condition; if not, replace them
- That the tyres have not been repaired, that the valves are in good condition; if not, replace them

## 3) - Valve:

- Comply with the instructions for use provided by the manufacturers (tightening and rim compatibility, type of alloys, alignment).
- Put the valve cap back on systematically. This ensures the valve mechanism is protected and that the tyre assembly is completely leak proof.
- Ensure the valve is in good condition (no ovalisation, signs of impact, etc.)
- Regularly check the tightening torques on screw valves.

## 4) - Fitting and removing a tyre

Fitting, removing, inflating and balancing tyres 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 constructors' and legal rules in choosing tyres.
- Prior inspection of the external and internal appearance of the tyre by the fitter.
- Compliance with the tyre fitting, removal, balancing and inflation procedures.
- Compliance with the positioning of the tyre on the vehicle (left, right; front, rear).
- Compliance with the working 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.

Fitting - Removal:

- Ensure that the fitting equipment is suited to the fitment type. When using this equipment, refer to the machine manufacturer's user manual. Comply with the fitting direction for a directional tyre.
- Lubricate rim seats and tyre beads with a suitable product.
- In the case of a tube type fitment (with inner tube), the dimension of the inner tube must correspond to that of the tyre (cross section and diameter) and the rim must be in a condition to accept the inner tube without damaging it. Also see page 2 of this catalogue, chapter entitled Tube Type - Tubeless.

Inflation

- Important note: only use inflation stations intended for this purpose. In no event should the operator remain in the immediate vicinity of the tyre 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 out of 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 valve interior, 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 tyre.
- Replace the valve interior and adjust the working pressure. Screw on the cap to ensure a complete seal.

Balancing

- The balancing machines must be calibrated in accordance with manufacturer instructions.
- Specific attention will be paid to the mechanisms (cone/screw plate) centring the assembly on the machine.

## 5) - Recutting tyres

Recutting or regrooving ECE R30-approved tyres, and thus intended for use on public highways, is STRICTLY prohibited.

## 6) - Storage

- In order to maintain the tyres characteristics and properties, compliance must be made with certain major points during storage. You should avoid:
- Direct and prolonged exposure to sunlight, sources of high heat and damp, long-term storage in stacks, the presence of solvents, lubricants, fuels and other chemicals.
- Equipment causing a release of ozone (transformers, welding machines, electric motors, etc.).
- The storage location must be dry, ventilated, out of direct light and kept solely for tyres. Racks allowing tyres to be stored vertically are to be used in order to avoid tension on the casings.

## 7) - Tyre aging

- Tyres age, even if they are not used, or if they are only used occasionally; excessive tyre age can lead to a possible loss of grip.
- Michelin's recommendation is not to leave a classic tyre in service beyond 10 years following its production date.
- Remove tyres from use when these show clear signs of aging or fatigue (cracks in the tread, shoulder or lower zone sidewall rubber, deformations, etc.). If in doubt, refer to a tyre professional.

## 8) - Monitoring and maintenance

- Tyre pressure verification prior to each outing and correction of this pressure if it no longer corresponds to the working pressure. Tyre pressures must be checked when cold (tyre that has not been run on, that has not been heated)
- Inflation with nitrogen does not do away with the need for regular tyre pressure checks.
- In the event of unusual pressure loss, check the internal and external condition of the tyre as well as the condition of the wheel and valve.
- Any visible perforation, cut or deformity must form the subject of an in-depth inspection by a tyre professional. Without intervention by a professional, never use a damaged tyre or one that has been run flat.

## 9) - Conditions of use

- Never treat the tread rubber with a chemical.
- Do not use tyres for which the background is unknown.
- 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)

Before any use, contact the Michelin Classic technical services: [classic.michelin.com](http://classic.michelin.com)  
Historic competition: [michelinmotorsport.com](http://michelinmotorsport.com)

Your dealer:

MICHELIN Pneus Collection

36, rue du Clos-Four

63000 Clermont-Ferrand

Tél. +33 (0)4 73 41 75 00

Internet : [classic.michelin.com](http://classic.michelin.com)

E-mail : [pneuretro@michelin.com](mailto:pneuretro@michelin.com)

