



Pirelli – Braking Wet and Dry

225/50 R17 - Summer

This report is only valid in its integrity.
An extraction or partial utilization of results for an external publication will be done under PIRELLI responsibility.



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Report 24CPCEXT-225
of 14/11/2024



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Timing

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- Date : Wednesday, November 6th
- Track : Idiada, Braking track – Zone 2
- Type of evaluation : Comparative wet and dry braking

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- DEKRA Test Center :
 - 1 Engineer performing wet braking and dry braking.
- PIRELLI :
 - 2 tire fitters to mount the tires and perform tires change during the test.

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Air and track temperature sensor.

1 Racelogic VBox 100 Hz to measure braking and traction times.

Wind speed follow up.

1 lift.

1 vehicle BMW 318d RWD with Engine 2.0L Diesel 150 HP with automatic gearbox.

Vehicle's load : 1 driver

During the test, the driver does not know which tires are mounted on the vehicle.

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Tire list

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BRIDGESTONE	Turanza 6 – 225/50R17 98Y XL	DOT 276 100H3M 3524
CONTINENTAL	Premium Contact 7 – 225/50R17 98Y XL	DOT 1CP032PPJ 3124
GOODYEAR	Efficient Grip Performance 2 – 225/50R17 98W XL	DOT 1A540 RB1R 1624 (1324 on Front right)
MICHELIN	Primacy 4+ – 225/50R17 98Y XL	DOT 1B5 0A08AX 3524
PIRELLI	Cinturato – 225/50R17 98Y XL	DOT 193 NU439U 3124

Tires have been provided by PIRELLI (for Pirelli, Michelin and Continental & DEKRA Test Center (for Goodyear and Bridgestone)

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Test Protocol

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Type of test :

Wet braking distance measurement : from 80 to 10 kph, start of braking at 85 kph + 3 kph.

Surface : wet asphalt

Dry braking distance measurement : from 100 to 10 kph, start of braking at 105 kph + 3 kph

Surface : dry asphalt

Tire Pressure :

Front : 2,3 bar.

Rear : 2,3 bar.

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Test conditions

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Number of wet braking : 8 performed, 6 are validated for the test.

Number of dry braking : 5 performed, 3 are validated for the test.

Temperature :

Air : between 16,7° and 21,5°C

Wet track : between 17,2° and 24,6°C

Dry track : between 18,6° and 30,9°C

Wind speed :

100 % of time with wind speed less than 1,0 m/s.

Tire set validation :

Wet braking - standard deviation less than 1,7 %. Difference mini/maxi : 0,97 meter

Dry braking - standard deviation less than 0,4 %. Difference mini/maxi : 0,29 meter

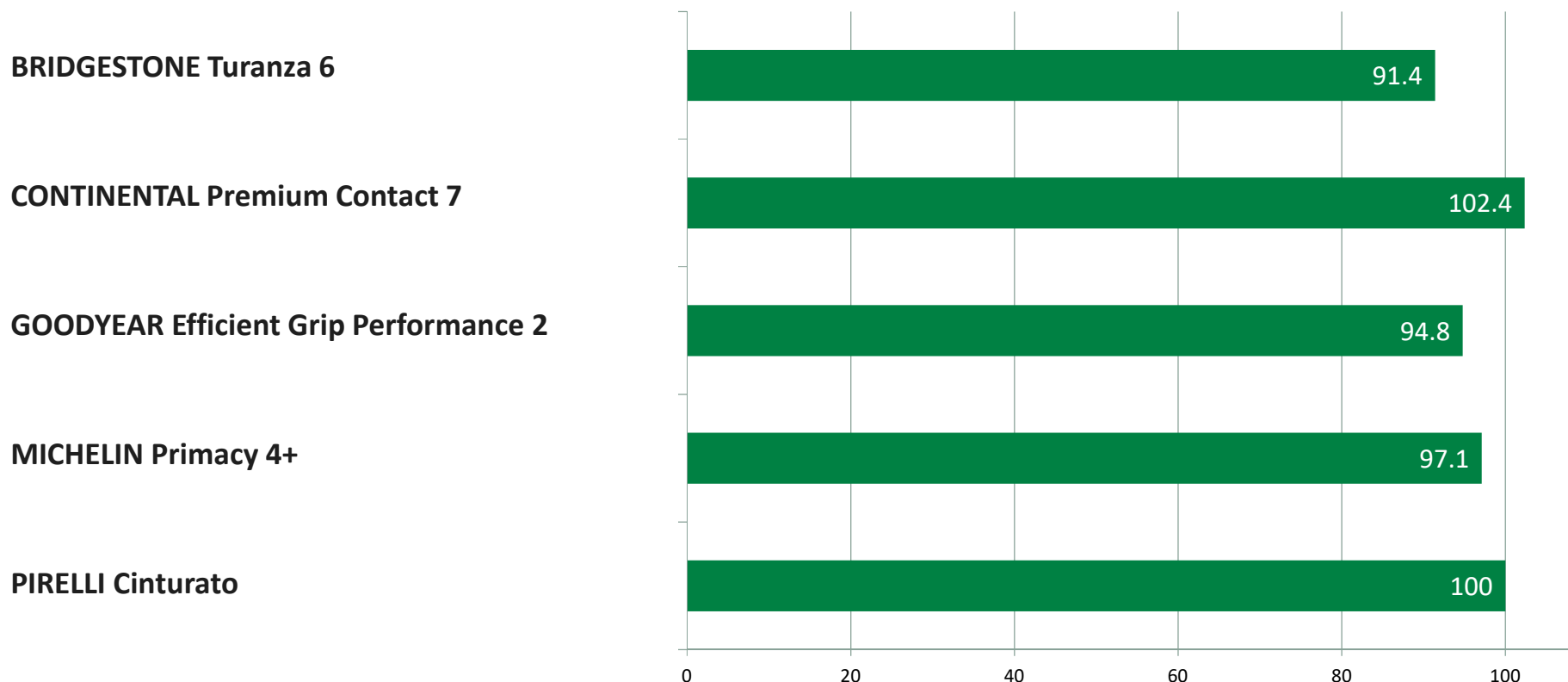
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Results – Wet braking

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Wet braking distance (%) - 80-10 kph



Min / max braking distance's difference between the best and worst : 2,42 meters

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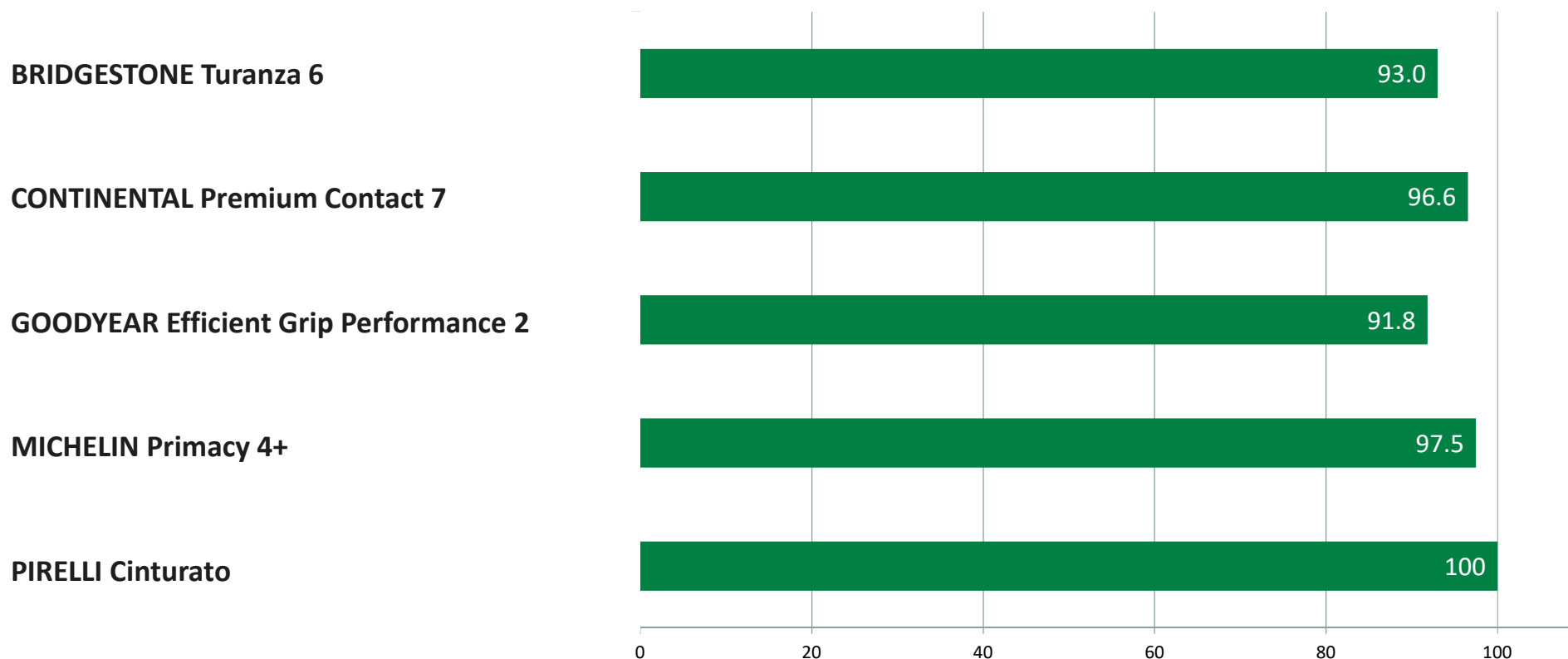
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Results – Dry braking

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Dry braking distance (%) - 100 - 10 kph



Min / max traction distance's difference between the best and worst : 2,63 meters

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Appendix : Data

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DEKRA Test Center

Your contacts



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Créateur de confiance

SYNTHESIS - WET BRAKING 80 - 10 KPH SUMMER - 225/50R17 98Y/W

REPORT # 24CPCEXT-225

	Datas (in meters)	Correlation Ratio	Correlated Result	Result %
Result				
MICHELIN Primacy 4+	22.41	1.012	22.69	97.1
PIRELLI Cinturato	21.87	1.008	22.05	100
BRIDGESTONE Turanza 6	23.85	1.004	23.95	91.4
MICHELIN Primacy 4+	22.69	1.000	22.69	97.1
CONTINENTAL Premium Contact 7	21.64	0.995	21.53	102.4
GOODYEAR Efficient Grip Performance 2	23.44	0.990	23.20	94.8
MICHELIN Primacy 4+	23.04	0.985	22.69	97.1

Ranking			Result %
	Ranking		
CONTINENTAL Premium Contact 7	1st		102.4
PIRELLI Cinturato	2nd		100
MICHELIN Primacy 4+	3rd		97.1
GOODYEAR Efficient Grip Performance 2	4th		94.8
BRIDGESTONE Turanza 6	5th		91.4

MICHELIN Primacy 4+ – 225/50R17 98Y XL

Beginning

Time

08:40

End

Date

06/11/2024

Time

09:10

Air Temperature

16.7

Track Temperature

18.6

Wind speed

< 1 m/s

File michelin 2dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1	32.59		0.041096093
Frein 2		33.31	
Frein 3		33.25	
Frein 4		33.35	Average
Frein 5			33.30
Frein 6			
Frein 7			
Frein 8			Coef variation
			0.1

PIRELLI Cinturato – 225/50R17 98Y XL

BeginningTime09:30

End

Date06/11/2024

Time10:05

Air Temperature19.1

Track Temperature21.7

Wind speed< 1 m/s

File pirelli 2dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1		32.42	0.043204938
Frein 2		32.34	
Frein 3	32.61		
Frein 4	32.19		Average
Frein 5		32.32	32.36
Frein 6			
Frein 7			
Frein 8			Coef variation 0.1

BRIDGESTONE Turanza 6 – 225/50R17 98Y XL

Beginning

Time

10:20

End

Date

06/11/2024

Time

11:00

Air Temperature

20.2

Track Temperature

25.3

Wind speed

< 1 m/s

File bridgestone 2dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1		34.55	0.058878406
Frein 2		34.41	
Frein 3	34.72		
Frein 4	34.82		Average
Frein 5		34.51	34.49
Frein 6			
Frein 7			
Frein 8			Coef variation 0.2

MICHELIN Primacy 4+ – 225/50R17 98Y XL

Beginning

Time

11:20

End

Date

06/11/2024

Time

11:50

Air Temperature

20.6

Track Temperature

27.6

Wind speed

< 1 m/s

File michelin 4dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1		32.83	0.134412301
Frein 2		32.82	
Frein 3	33.40		
Frein 4		33.11	Average
Frein 5			32.92
Frein 6			
Frein 7			
Frein 8			Coef variation
			0.4

CONTINENTAL Premium Contact 7 – 225/50R17 98Y XL

Beginning

Time

12:00

End

Date

06/11/2024

Time

12:35

Air Temperature

21.4

Track Temperature

27.8

Wind speed

< 1 m/s

File continental 2dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1	32.80		0.118977122
Frein 2	33.51		
Frein 3		33.19	
Frein 4		32.96	Average
Frein 5		33.23	33.13
Frein 6			
Frein 7			
Frein 8			Coef variation 0.4

GOODYEAR Efficient Grip Performance 2 – 225/50R17 98W XL

Beginning

Time

13:00

End

Date

06/11/2024

Time

13:30

Air Temperature

21.8

Track Temperature

29.3

Wind speed

< 1 m/s

File goodyear 2dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1	34.34		0.063420992
Frein 2		34.49	
Frein 3		34.64	
Frein 4		34.53	Average
Frein 5	34.25		34.55
Frein 6			
Frein 7			
Frein 8			Coef variation 0.2

MICHELIN Primacy 4+ – 225/50R17 98Y XL

Beginning

Time

13:45

End

Date

06/11/2024

Time

14:15

Air Temperature

21.5

Track Temperature

30.9

Wind speed

< 1 m/s

File michelin 6dry

	Dry Braking 100 - 10 km/h Distance (m)	Wet Braking Distance validated	Std Dev.
Frein 1		32.71	0.080138769
Frein 2		32.54	
Frein 3		32.71	
Frein 4	33.03		Average
Frein 5			32.65
Frein 6			
Frein 7			
Frein 8			Coef variation
			0.2

	Datas (in meters)	Result %		
Result				
MICHELIN Primacy 4+	33.30	0.989	32.92	97.5
PIRELLI Cinturato	32.36	0.992	32.11	100
BRIDGESTONE Turanza 6	34.49	0.996	34.36	93.0
MICHELIN Primacy 4+	32.92	1.000	32.92	97.5
CONTINENTAL Premium Contact 7	33.13	1.003	33.22	96.6
GOODYEAR Efficient Grip Performance 2	34.55	1.006	34.74	91.8
MICHELIN Primacy 4+	32.65	1.008	32.92	97.5

Ranking				
		Ranking	Result %	
PIRELLI Cinturato		1st		100
MICHELIN Primacy 4+		2nd		97.5
CONTINENTAL Premium Contact 7		3rd		96.6
BRIDGESTONE Turanza 6		4th		93.0
GOODYEAR Efficient Grip Performance 2		5th		91.8