



Product Service

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TÜV SÜD - Tire Test 2015

225/50 R17 98 V XL – Goodyear Ultragrip Performance Gen.1

Tire Performance Test acc. to PPP 90023

Test Period: December 2014 – January 2015

Report No. 713051336-01G

TIRE DETAILS

DIMENSION: 225/50 R17 98 V XL

TIRE BRANDS / PATTERNS IN THE TEST:

COMPETITORS:

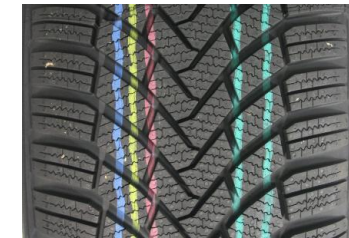
NEW PRODUCT:



**GOODYEAR
ULTRAGRIP PERFORMANCE GEN-1
DOT C13L 4714**



**BRIDGESTONE
BLIZZAK LM32-S
DOT 8CJR R8K 3914**



**CONTI
WINTERCONTACT TS 850
DOT LM40 D2XX 3314**

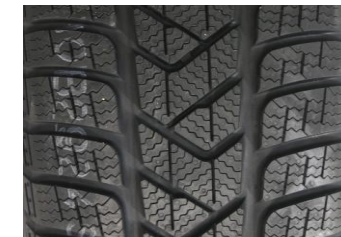
PREDECESSOR: (voluntarily included upon client's request)



**GOODYEAR
ULTRAGRIP 8 PERFORMANCE
DOT DM40 JC6R 4114**



**MICHELIN
ALPIN 5
DOT FU0A 04YX 3814**



**PIRELLI
WINTER SOTTOZERO 3
DOT XBNU N924 2714**

- The test samples of Goodyear Ultragrip Performance Gen-1 were provided for the test by the client.
- All other tires were purchased in the normal market by TÜV SÜD.
- TÜV SÜD randomly selected the tires for the individual tests.



TEST DETAILS

■ Test Locations

- Wet, Dry, Noise: GPG Mireval (F)
- Snow: Arctic Center Saariselkä (FIN)
- Ice: Ice Hall Montpellier (F)
- Rolling Resistance: TÜV SÜD PS Garching (D)

■ Test Vehicles

- Ice: Audi A4 1.8 TFSI (B8); Snow, Wet & Dry: BMW 318 d & 320 d (F30); Noise: VW Touran 1.6 TDI

■ Procedure and Evaluation

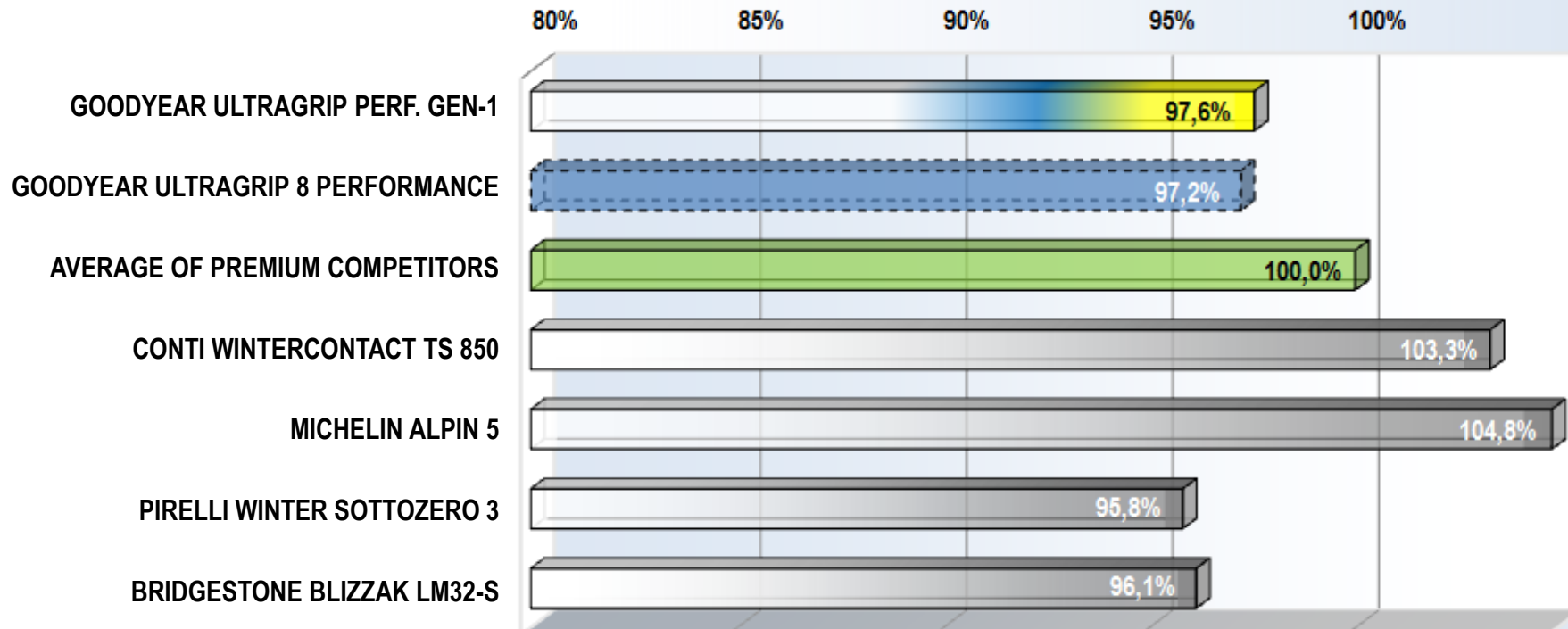
- In most tests, the reference/control tire is tested repeatedly in the progress of the test to detect and consider changes of the ambient test parameters and correct its performance by linear interpolation.
- Generally, all tires in a test are primarily evaluated in relation to the reference/control tire
- The performance is expressed as a percentage value, calculated on the basis of the measured and corrected test data
- In this present evaluation, the 100% baseline is formed by the average of the tested competitors.
- In all evaluations, a percentage > 100% means better and <100% means worse.

TEST RESULTS

■ AQUAPLANING STRAIGHT-LINE

- Water depth: ~ 8mm
- Aquaplaning speed at 15% slip difference
- Result Goodyear Ultragrip Performance Gen-1: Ø Aquaplaning speed 89.9 km/h

AQUAPLANING STRAIGHT-LINE PERFORMANCE * [%]



*) The calculation of the percentage performance is based on the aquaplaning speed.

TEST RESULTS

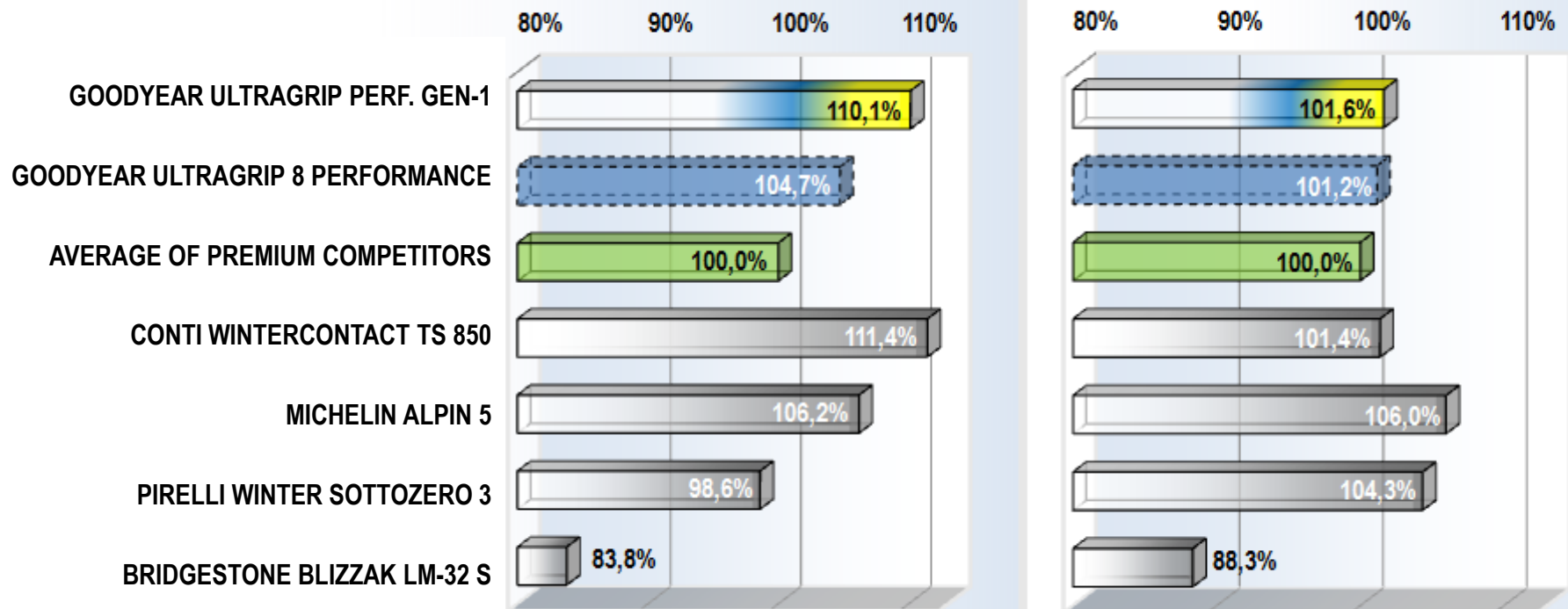
WET BRAKING

- ABS-braking - Speed range: 80 to 20 km/h - Tested on low and high μ wet surface
- Result Goodyear Ultragrip Performance Gen-1: \emptyset Stopping distance / mean deceleration low μ : 31.0 m / 7.46 m/s² high μ : 26.5 m / 8.73 m/s²

WET BRAKING PERFORMANCE [%]

LOW μ *[%]

HIGH μ *[%]



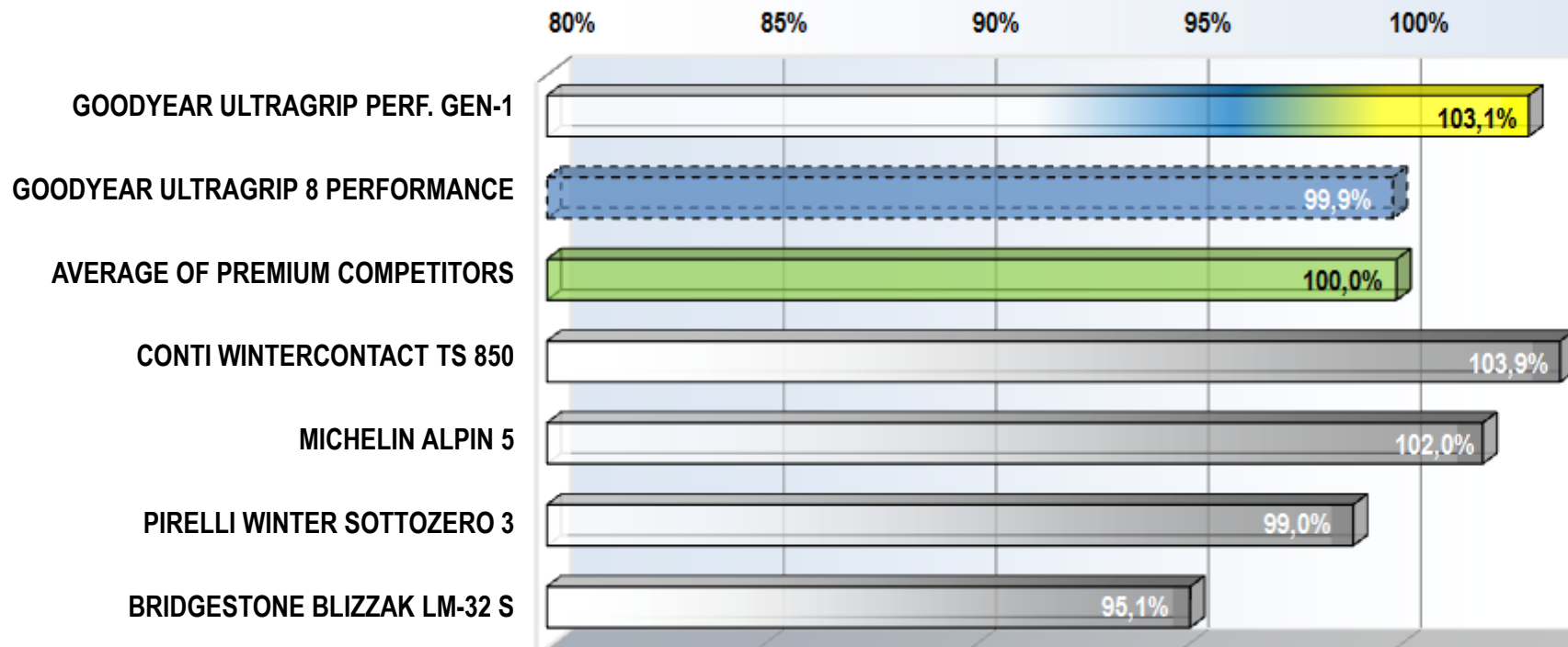
*) The calculation of the percentage performance is based on the mean deceleration values resulting from the measured braking distances.

TEST RESULTS

WET HANDLING

- ESP off
- Subjective assessment & lap times
- Handling track with wet asphalt, length: 1,700 m
- Result Goodyear Ultragrip Performance Gen-1: Ø Speed : ~90.0 km/h Ø Rating (out of max. 10): 8.1

WET HANDLING PERFORMANCE * [%]



*) The calculation of the percentage performance is based on the speed and the rating scores (at the ratio 2:1).

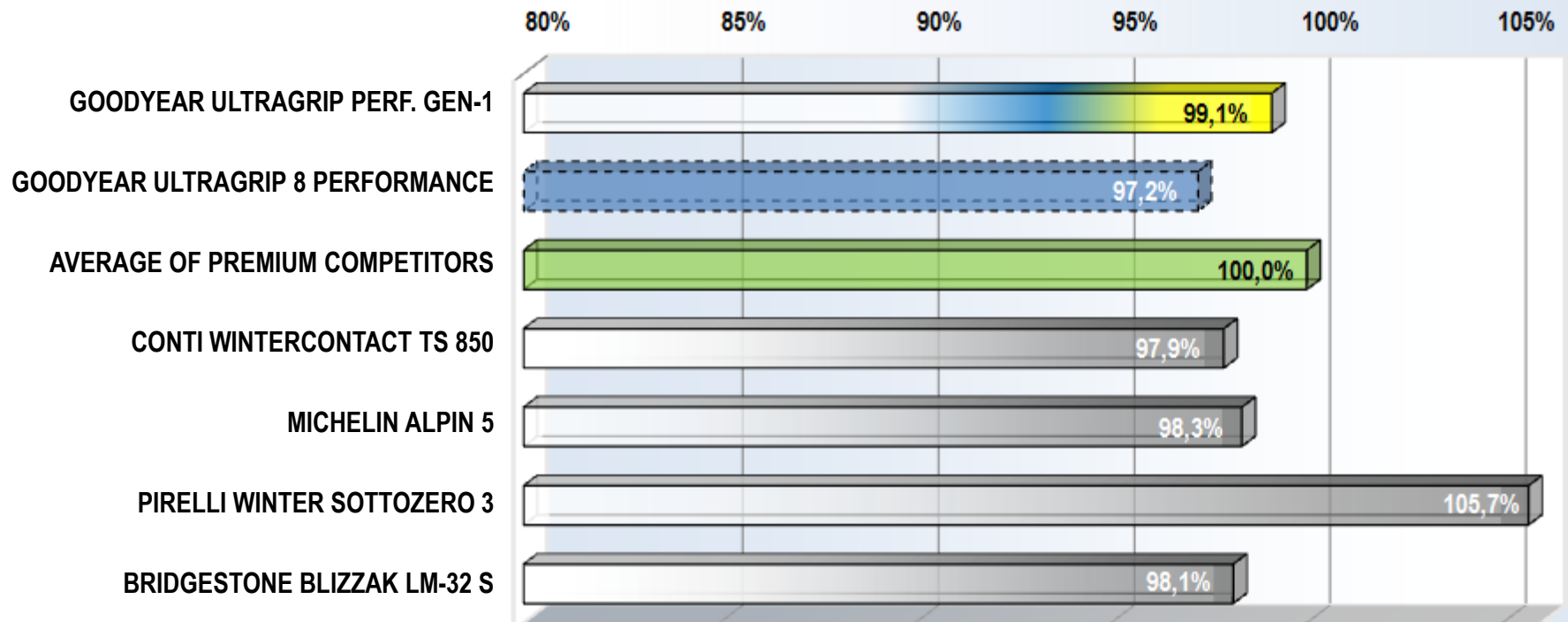


TEST RESULTS

▪ DRY BRAKING

- ABS-braking - Speed range: 100 to 0 km/h
- Result Goodyear Ultragrip Performance Gen-1: Ø Stopping distance / mean deceleration: 41.5 m/ 9.31 m/s²

DRY BRAKING PERFORMANCE * [%]



*) The calculation of the percentage performance is based on the mean deceleration values resulting from the measured braking distances.

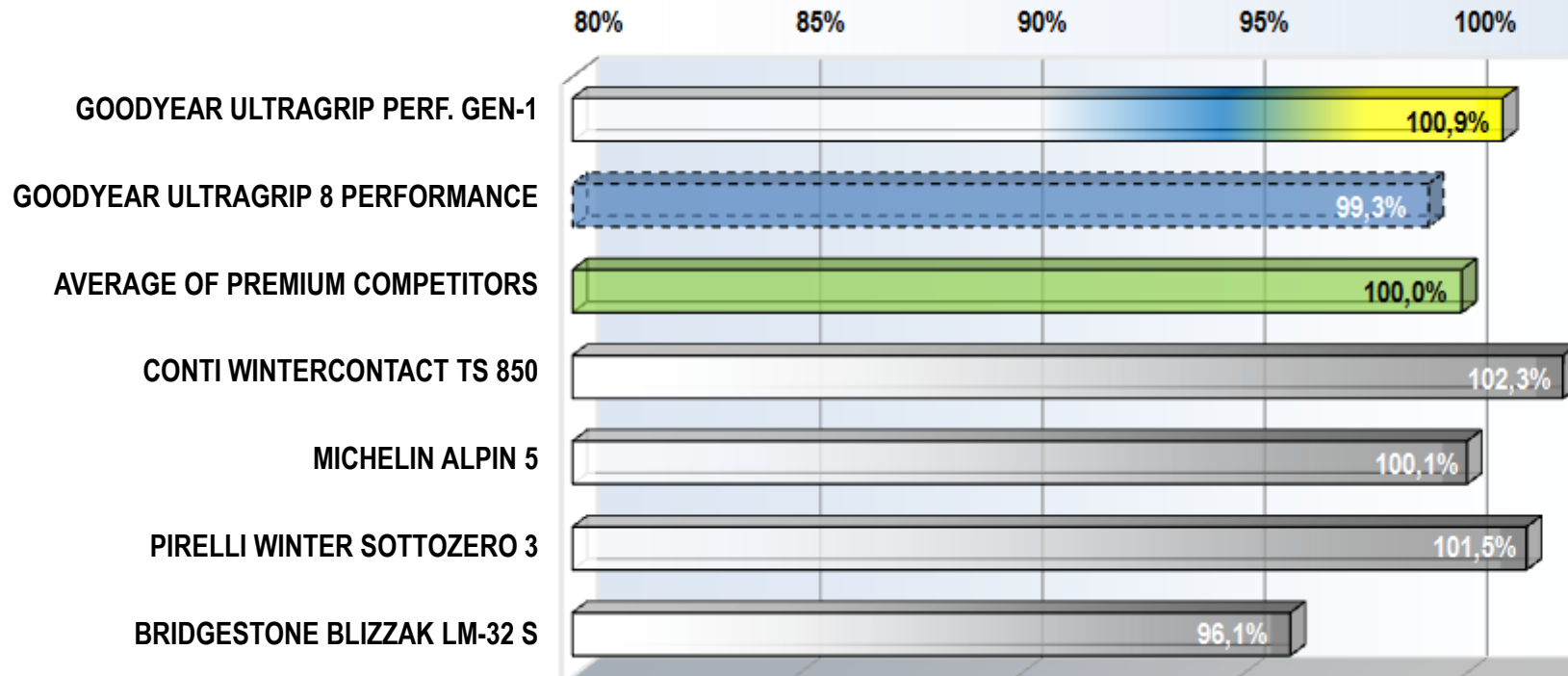


TEST RESULTS

▪ DRY HANDLING

- ESP off
- Subjective assessment & lap times
- Handling track length: 3,100 m
- Result Goodyear Ultragrip Performance Gen-1: Ø Speed : ~110.7 km/h Ø Rating (out of max. 10): 7.5

DRY HANDLING PERFORMANCE * [%]



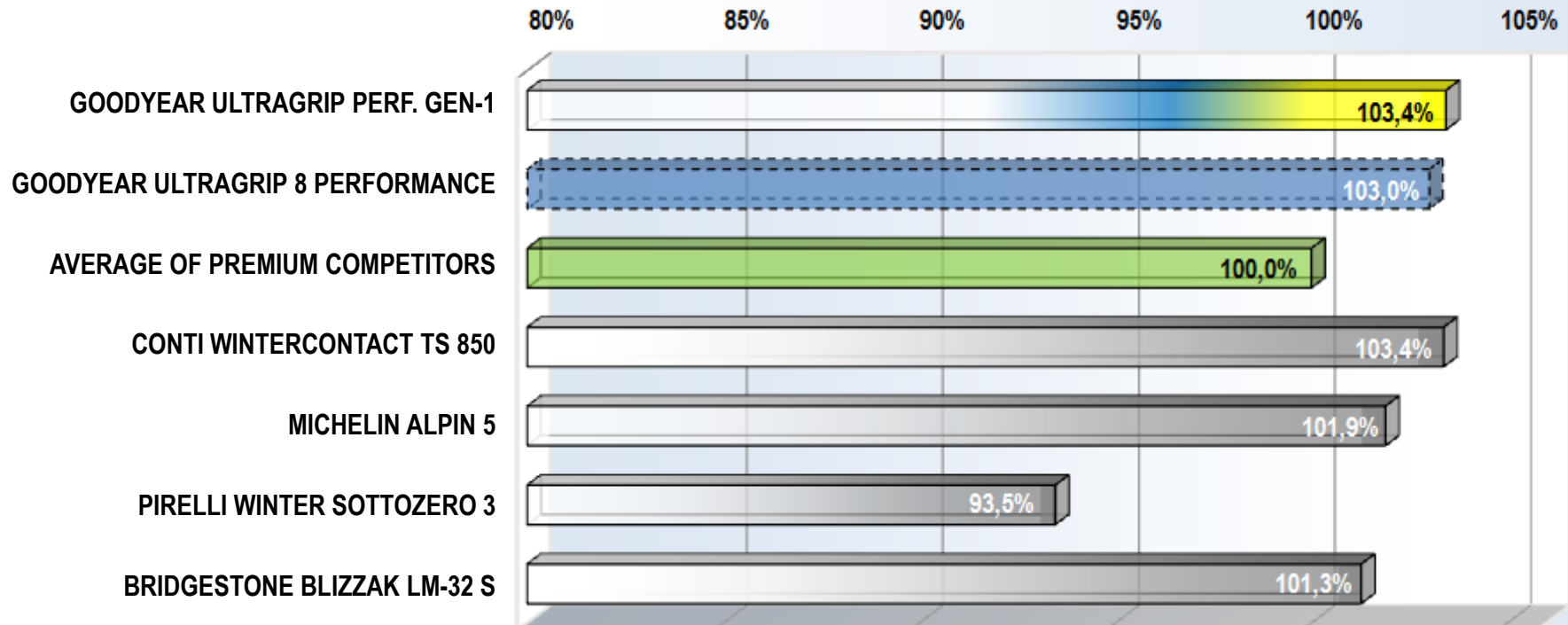
*) The calculation of the percentage performance is based on the speed and the rating scores (at the ratio 2:1).

TEST RESULTS

▪ BRAKING ON SNOW

- ABS-braking - Speed range: 40 to 5 km/h - Duplicate testing (test and re-test on two different days) - Test surface: compressed snow
- Result Goodyear Ultragrip Performance Gen-1: Ø Stopping distance / mean deceleration (average of test & re-test): 17.2 m / 3.54 m/s²

SNOW BRAKING PERFORMANCE * [%]



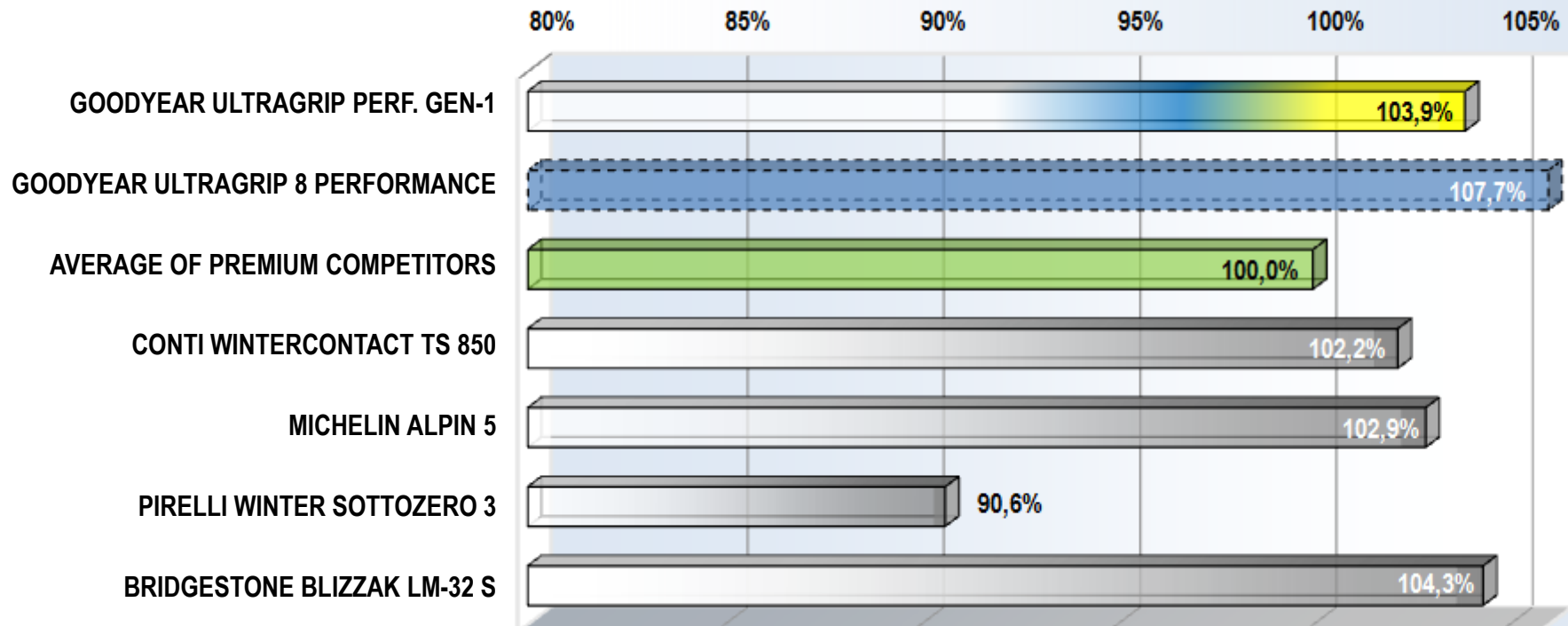
*) The calculation of the percentage performance is based on the mean deceleration values resulting from the measured braking distances.

TEST RESULTS

■ ACCELERATION ON SNOW

- ETC activated
- Speed range: 10 to 30 km/h
- Duplicate testing (test and re-test on two different days)
- Test surface: compressed snow
- Result Goodyear Ultragrip Performance Gen-1: \emptyset acceleration time / mean acceleration (average of test & re-test): 3.95 sec / 1.41 m/s²

SNOW TRACTION PERFORMANCE * [%]



*) The calculation of the percentage performance is based on the mean acceleration values resulting from the measured acceleration times

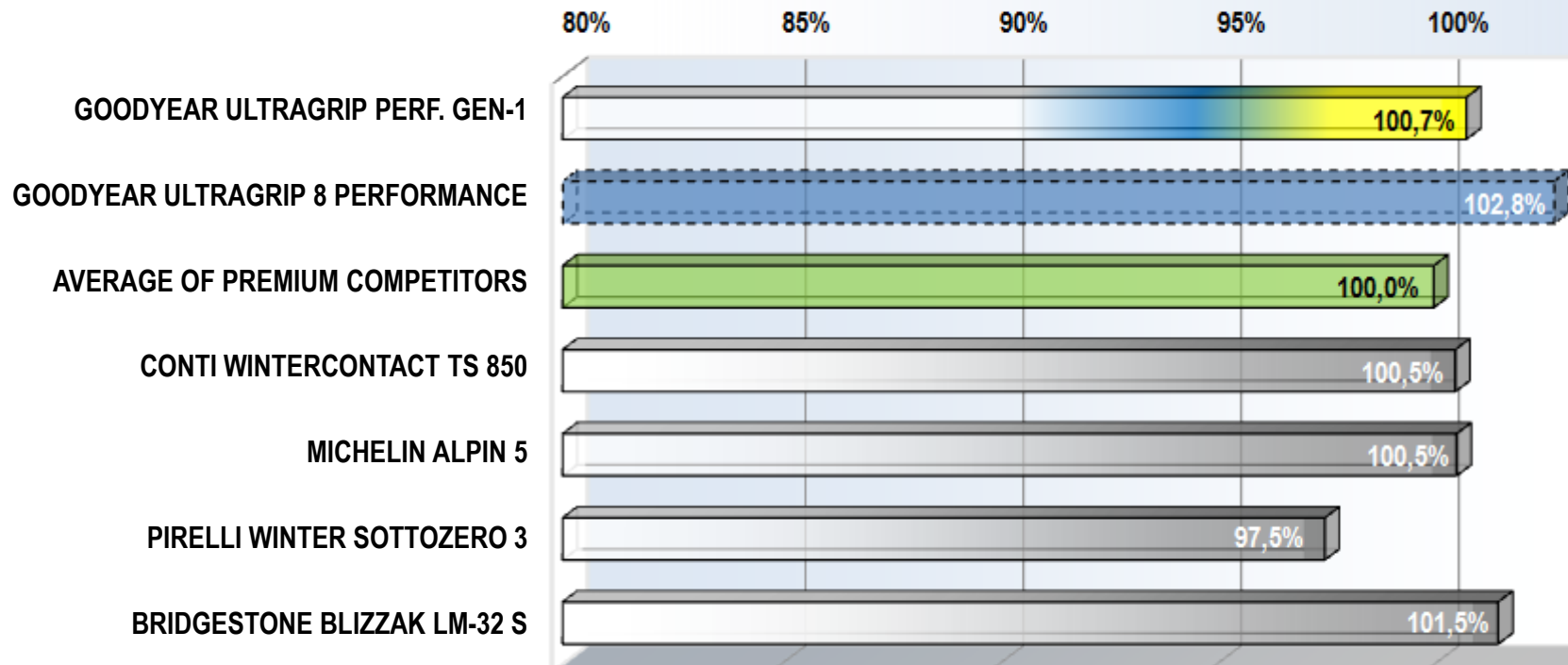


TEST RESULTS

■ SNOW HANDLING

- ESP off - Subjective assessment & lap times - Duplicate testing on two different days - Handling track (compressed snow) length: 680 m
- Result Goodyear Ultragrip Performance Gen-1 (average of test and re-test) : Ø Speed : 34.9 km/h Ø Rating (out of max. 10): 7.7

SNOW HANDLING PERFORMANCE * [%]



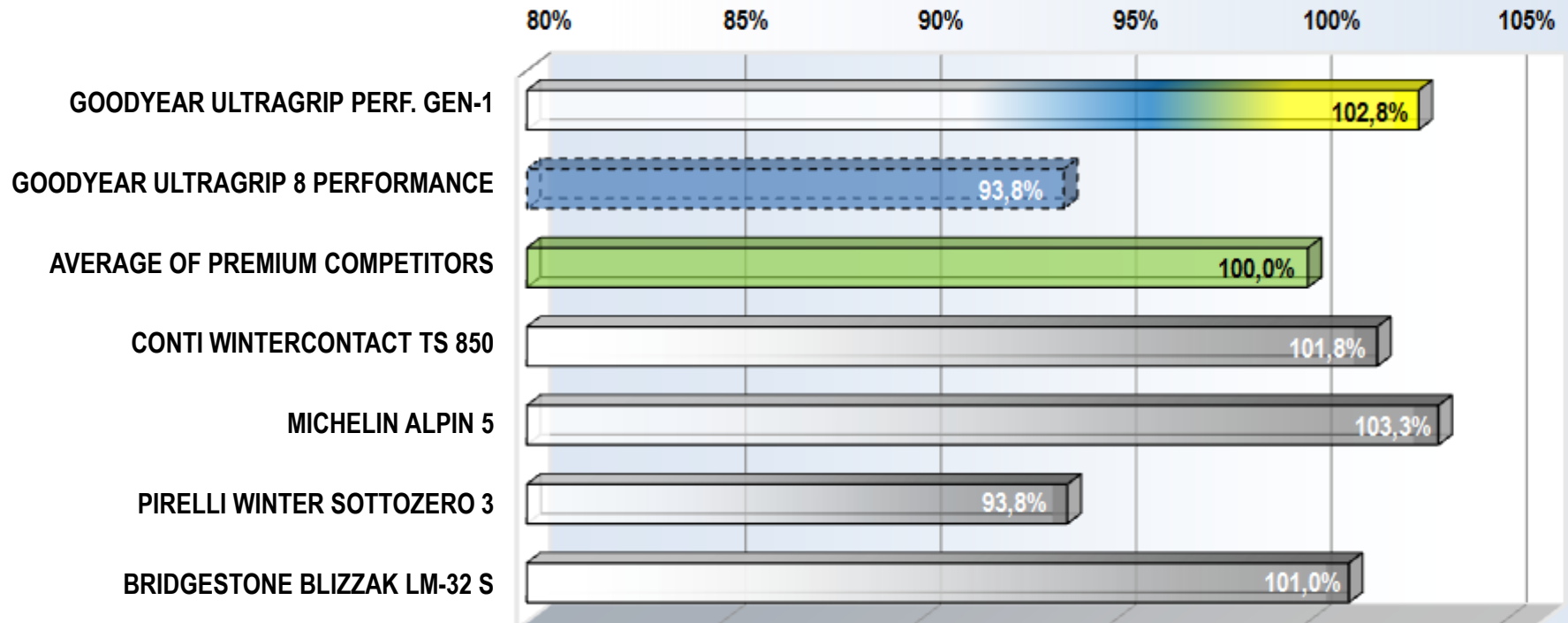
*) The calculation of the percentage performance is based on the speed and the rating scores (at the ratio 2:1).

TEST RESULTS

▪ BRAKING ON ICE

- ABS-braking - Speed range: 20 to 5 km/h - Test surface: polished, artificial ice
- Result Goodyear Ultragrip Performance Gen-1: Ø Stopping distance / mean deceleration: 12.8 m / 1.13 m/s²

ICE BRAKING PERFORMANCE * [%]



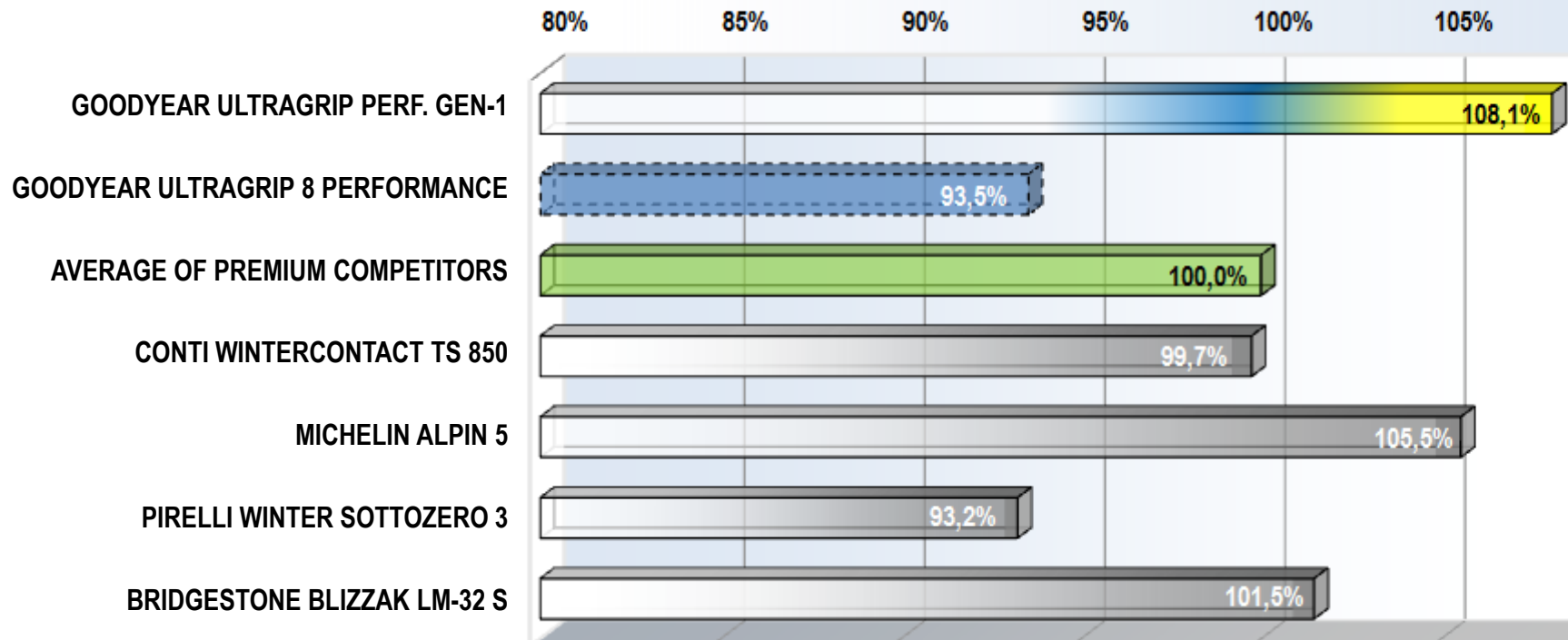
*) The calculation of the percentage performance is based on the mean deceleration values resulting from the measured braking distances.

TEST RESULTS

■ ACCELERATION ON ICE

- ETC activated - Speed range: 8 to 18 km/h - Test surface: polished, artificial ice
- Result Goodyear Ultragrip Performance Gen-1: Ø acceleration time / mean acceleration: 4.88 sec / 0.57 m/s²

ICE TRACTION PERFORMANCE * [%]



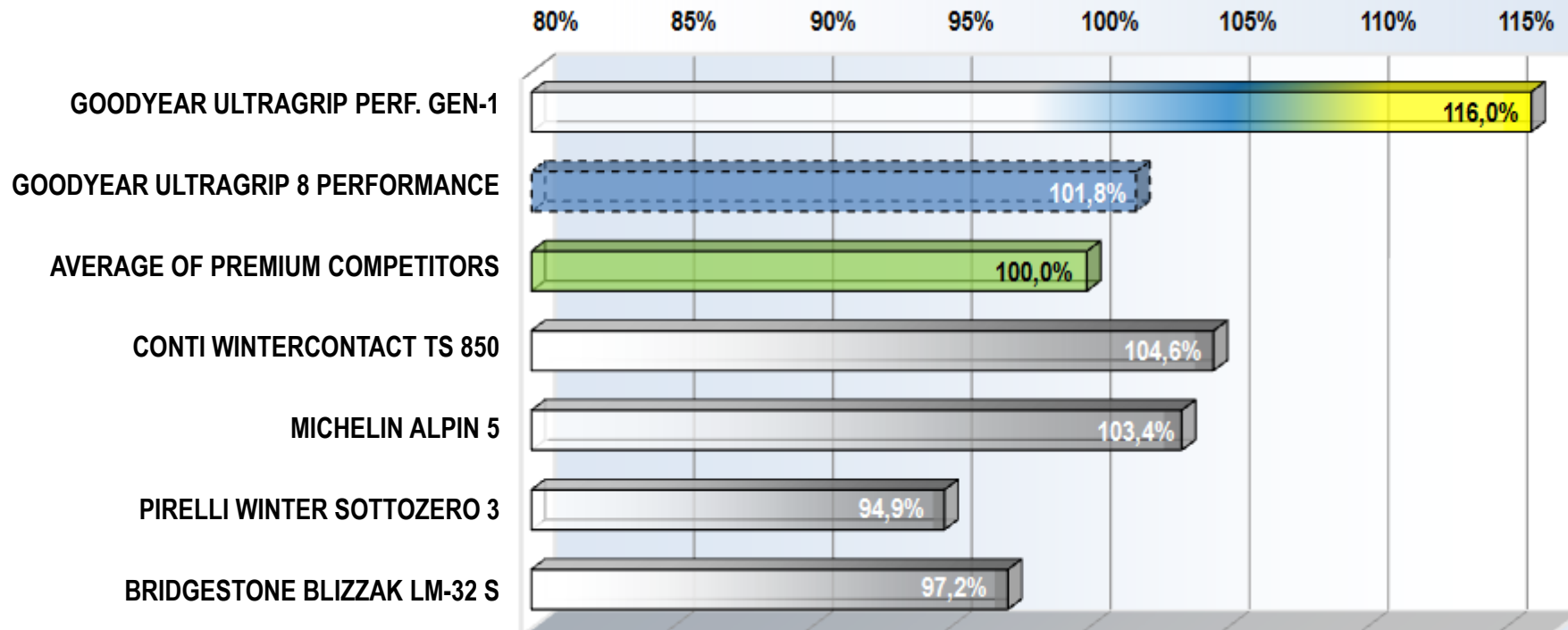
*) The calculation of the percentage performance is based on the mean acceleration values resulting from the measured acceleration times

TEST RESULTS

▪ LATERAL GRIP ON ICE

- ESP off - Circle radius 10 m - Test surface: polished, artificial ice
- Result Goodyear Ultragrip Performance Gen-1: Ø lap time / mean lateral acceleration: 18.60 sec / 1.14 m/s²

CORNERING PERFORMANCE ON ICE * [%]



*) The calculation of the percentage performance is based on the mean lateral acceleration values resulting from the measured lap times

TEST RESULTS

■ ROLLING RESISTANCE

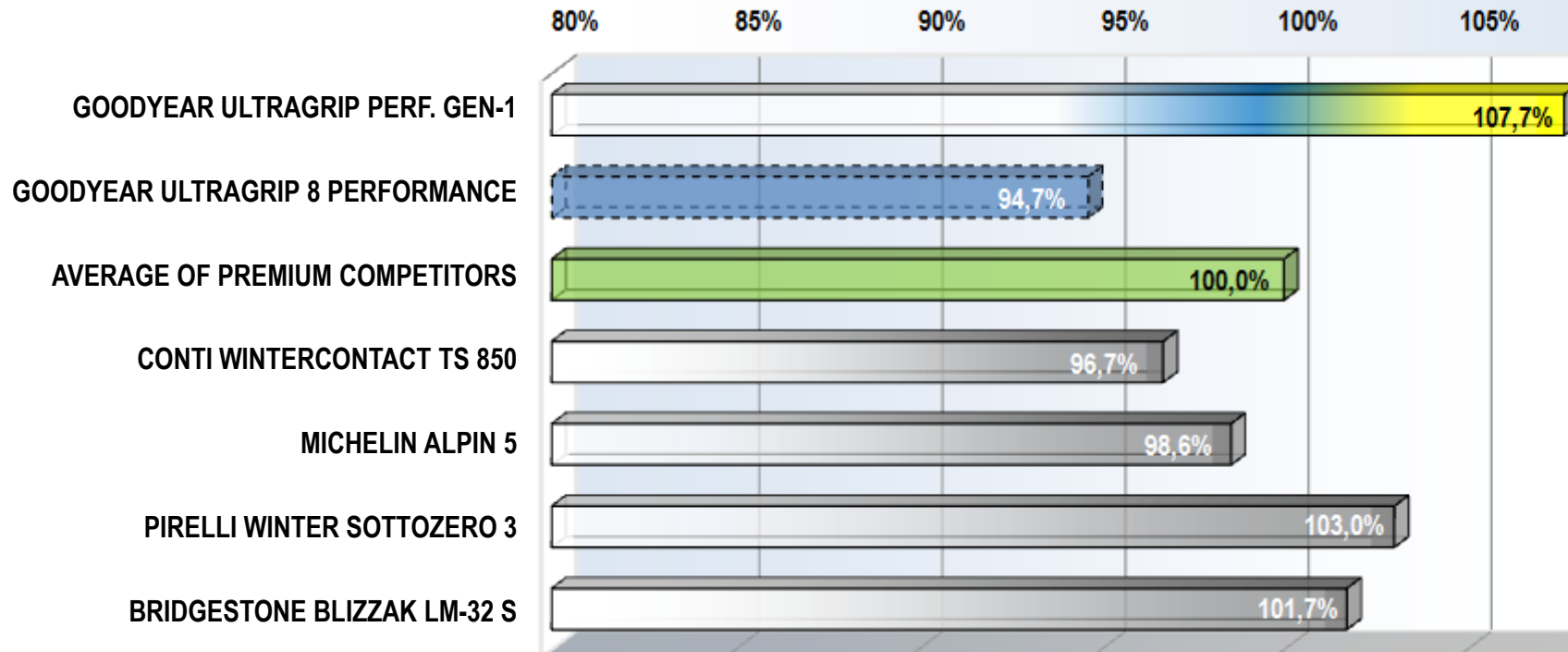
- Acc. to ISO 28580 / EC 1222/2009

- Electrical power method

- Load / inflation : 600 kg / 2.5 bar

- Result Goodyear Ultragrip Performance Gen-1: RR-Force $F_R = 49.7 \text{ N}$ RR-Coefficient $c_R = 8.5 \text{ kg/t}$ (\triangleq EC Label RRC = 8.1)

LOW ROLLING RESISTANCE PERFORMANCE * [%]



*) The calculation of the percentage performance is based on the reciprocal values of the measured rolling resistance forces.

TEST RESULTS

■ PASS-BY NOISE

- In accordance to ECE R117

- Reference speed: 80 km/h

- Load & Inflation FA / RA: 1065/ 1070 kg - 2.05 / 2.05 bar

TIRE ROLLING NOISE (measured, normalized values) [dB (A)]

The resulting type approval values are given in brackets.

