



***USE OF THE TIRE, A
KEY LEVER FOR
REDUCING
ENVIRONMENTAL
IMPACT***

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Automobile Business Line Director



MEDIA DAY

[November 25, 2021]



"A 100%-SUSTAINABLE TIRE"
AT EVERY STAGE OF ITS LIFE CYCLE



MEDIA DAY

[November 25, 2021]



***THE TIRE USE PHASE:
BETWEEN 75 AND 90% OF ITS ENVIRONMENTAL IMPACT***

Rolling resistance is
***20% OF THE ENERGY
FROM A CAR'S ENGINE***



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[November 25, 2021]



**THE TIRE USE PHASE:
BETWEEN 75 AND 90% OF ITS ENVIRONMENTAL IMPACT**

Rolling resistance is
**20% OF THE ENERGY
FROM A CAR'S ENGINE**



**MICHELIN HAS HALVED THE
ROLLING RESISTANCE IN ITS TIRES
OVER 30 YEARS**



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CONTINUOUS INNOVATIONS TO IMPROVE ENERGY PERFORMANCE



LESS FUEL
CONSUMPTION with
MICHELIN e.PRIMACY



**GREATER
RANGE**
for electric vehicles

**6.9 MILLION METRIC
TONS OF CO₂**
emissions prevented (2020)

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IMPROVING THE TIRE'S ENVIRONMENTAL FOOTPRINT THROUGH LONG-LASTING PERFORMANCE

Long-lasting performance means **LESS:**

WASTE
MATERIALS
ENERGY



UP TO 128 MILLION TIRES
could be spared

6.6 MILLION METRIC TONS OF CO₂
could be prevented

EUR 6.9 BILLION
could be saved

IF ALL TIRES WERE USED UP TO THE LEGAL WEAR LIMIT IN EUROPE:

1.6 MM

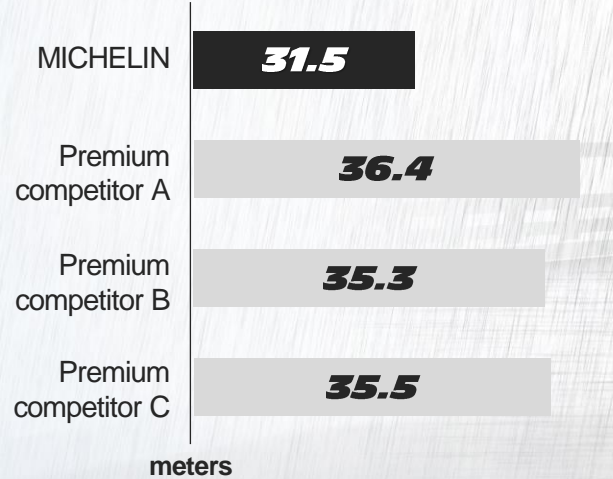
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SAFE TIRES, THROUGHOUT THEIR LIFESPAN

BRAKING DISTANCE WHEN WORN¹



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¹ External tests performed in June 2021 by TÜV SÜD Product Service, at Michelin's request, between 80 and 20 km/h on MICHELIN Primacy 4+ 205/55 R16 91V and competitor tires fitted to a VW Golf 8



PERFORMANCES MADE TO LAST



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MICHELIN'S COMMITMENT TO REDUCE WEAR PARTICLES



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MICHELIN'S COMMITMENT TO REDUCE WEAR PARTICLES

TEST & TECHNIK

SO VIEL GUMMI VERLIERT EIN REIFEN

1,7 KG Michelin

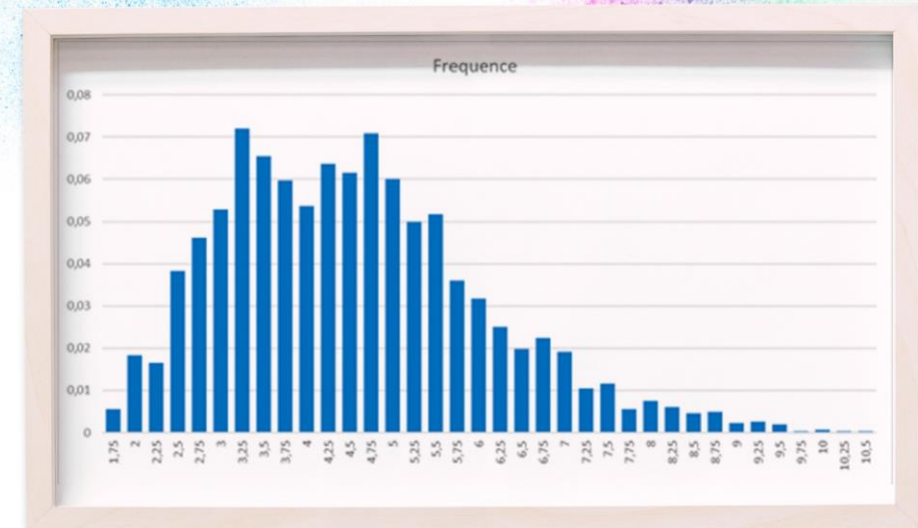
Hersteller	Michelin	Goodyear	Continental	Pirelli	Maxxis	Yokohama	Sumitomo	Wipac	Wald
Gewichtverlust per 1000 km in Gramm pro Reifen	210 Gramm	245 Gramm	258 Gramm	272 Gramm	288 Gramm	280 Gramm	284 Gramm	294 Gramm	315 Gramm
Gewichtverlust Jahresfahrleistung 20.000 km/Fahrzeug	1,69 Kilogramm	1,96 Kilogramm	2,06 Kilogramm	2,18 Kilogramm	2,30 Kilogramm	2,32 Kilogramm	2,35 Kilogramm	2,52 Kilogramm	3,15 Kilogramm

Multipliziert man die Jahresfahrleistung von vier Reifen, ergibt sich im günstigsten Fall ein anfallender Reifenabrieb von knapp 1,7 Kilogramm. Gummi- und Kunststoffpartikel, die in der Luft

Hersteller	Goodyear	Continental	Pirelli	Maxxis	Yokohama	Sumitomo	Wipac	Wald
Gewichtverlust per 1000 km in Gramm	32,3	32,5	33,6	34,7	35,8	38,8	39,2	44,6
Gewichtverlust Jahresfahrleistung 20.000 km/Fahrzeug in Kilogramm	258	2,60	2,69	2,8	2,86	3,10	3,14	3,57

schweben oder im Straßengraben landen. Die Unterschiede zwischen den Kandidaten sind überraschend groß: der Giti erzeugt auf gleicher Strecke die doppelte Abriebmenge.

3,6 KG Giti



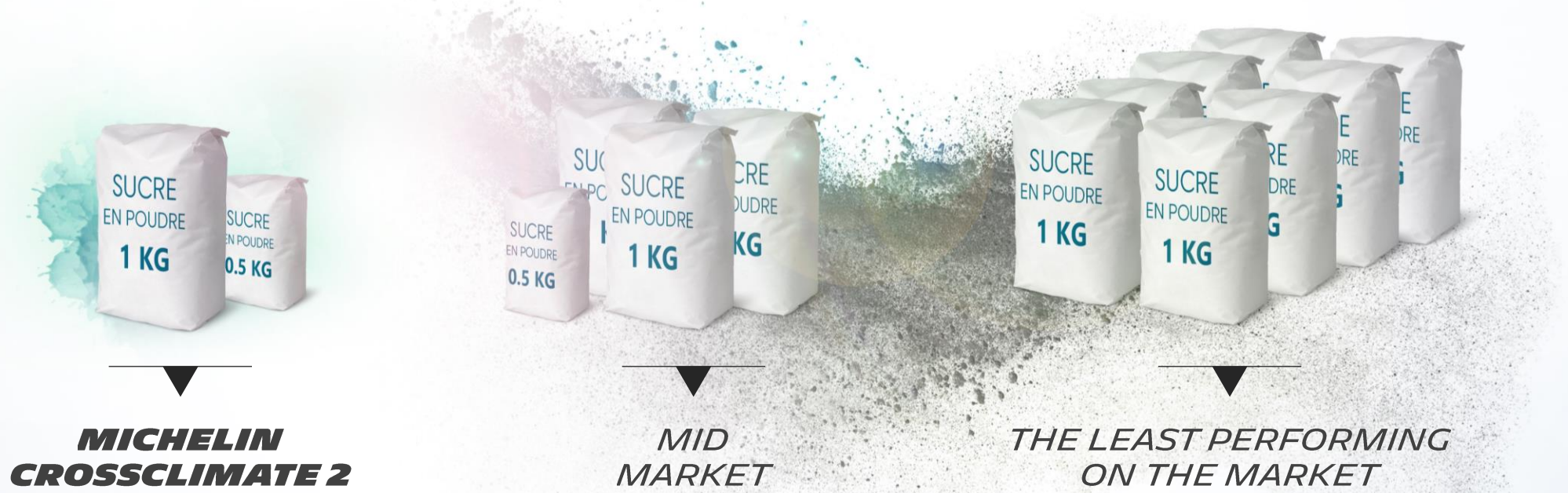
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MICHELIN'S COMMITMENT TO REDUCE WEAR PARTICLES

*CALCULATIONS FOR 4 TIRES ON A VEHICLE DRIVING 20,000 KM/YEAR, **PARTICLES FROM TIRES ONLY****



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*Autobild results in October 2021 performed on 17 All Season tires and Michelin studies on 282



**THE CONNECTED TIRE, A NEW LEVER
FOR SAFER, EFFICIENT AND SUSTAINABLE
MOBILITY**

*ALL MICHELIN
TIRES WILL BE...*



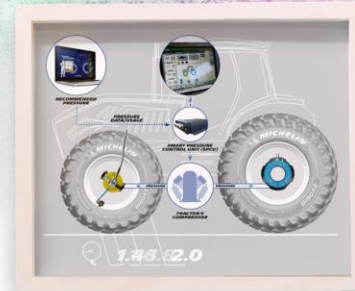
**...CONNECTABLE
BY 2024**

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THE CONNECTED TIRE, A NEW LEVER FOR SAFER, EFFICIENT AND SUSTAINABLE MOBILITY



CONNECTIVITY PLAYS A ROLE IN DEVELOPING IMPROVED USE AND A LOWER CARBON FOOTPRINT

CONCRETE EXAMPLES THAT HAVE ALREADY PROVED THEMSELVES

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**USE, A CRUCIAL PHASE FOR SAFER, CLEANER, MORE EFFICIENT
AND ACCESSIBLE MOBILITY**

**ROLLING
RESISTANCE**

**PERFORMANCE
LONG-LASTING**

CONNECTIVITY



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