



PRESS RELEASE

PIRELLI LAUNCHES THE P ZERO E: THE SPORTING TYRE THAT'S A CHAMPION OF TECHNOLOGY AND SUSTAINABILITY

- **More than 55% of materials used are natural or recycled in origin, as certified by Bureau Veritas, throughout the launch range**
- **The only UHP road product on the market with a triple A rating in all sizes**
- **100% of the range is marked Pirelli Elect: specific technology for Battery Electric Vehicles**
- **RunForward makes its debut: new technology that allows journeys to continue even with a puncture**
- **Developed using systems based on artificial intelligence and driving simulation**

Goodwood, July 13, 2023. Pirelli presents the P Zero E: a new tyre that integrates the most recent technical innovations developed by Pirelli to serve the latest trends in electrified and sustainable mobility. This is the first UHP tyre on the market with more than 55% of materials of natural and recycled origin, scoring a triple A rating on the European tyre label throughout the range and featuring performance that remains consistent whether the tyre is new or used. This tyre was specifically developed for battery electric vehicles, as shown by the 'Elect' marking on every product in the range, which denotes a low rolling resistance and reduced noise. RunForward also makes its debut: a new technology from Pirelli that allows journeys to continue even with a puncture, in order to reach the nearest tyre shop. Advanced virtualisation technologies were used throughout the design of this tyre, based on artificial intelligence, neural networks, and driving simulation. Pirelli's research and development department increasingly relies on machine learning to predict the performance of each tyre under different driving conditions before a physical prototype is even produced. These simulation systems are able to predict the behaviour of tyres based on previous development, delivering efficient solutions.

THE FIRST UHP TYRE WITH MORE THAN 55% OF SUSTAINABLE MATERIALS*

Thanks to years of research on new materials and a careful selection of suppliers, Pirelli is first to produce a high-performance tyre with 55% of its materials of natural and recycled origin throughout the launch range*, as certified by Bureau Veritas: a world leader in verifying conformity and certification in quality, environment, health, safety, and social responsibility (to ISO14021 standard). The main challenge for Pirelli's research and development department was that of matching sustainability with the high performance needed from a UHP tyre. The road that the engineers have gone down will lead to other products in future that contain a high percentage of natural and recycled materials, which will be identified by a dedicated and bespoke sidewall logo, starting from the P Zero E. Pirelli's study of the entire lifecycle of the P Zero E, which has also been verified by Bureau Veritas, shows a 24% reduction in CO₂ emissions compared to a previous generation Pirelli tyre**. Furthermore, the attention paid to the materials used has allowed a reduction in the amount of fossil and mineral-derived ingredients, which have instead been swapped for primary materials that are natural and recycled in origin (-12 kilograms compared to an equivalent P Zero in the same size***).



THE ONLY UHP TYRE WITH A TRIPLE A RATING ACROSS THE ENTIRE RANGE

Pirelli P Zero E has obtained the highest rating (A) in all parameters of the European tyre label in all available sizes. This starts with rolling resistance, because of the specific compounds used (*Rolling Reduction Compounds*), which help to increase the range of battery-powered vehicles and extend tyre life thanks to reduced wear. The compounds also play a fundamental role in enhancing car control throughout various different driving situations, particularly wet braking. Another key area of development to obtain the triple A classification was the tread pattern, designed using virtualisation and simulation techniques derived from motorsport. The tread is stiff enough to put down the considerable torque generated by electric vehicles, while the optimisation of the position and size of the grooves – which are characterized by a new patented shape with rounded corners – also help to reduce tyre noise.

PIRELLI ELECT TECHNOLOGIES THROUGHOUT THE RANGE

The entire P Zero E range is distinguished by the Elect marking on the sidewall, which identifies the package of technologies developed by Pirelli to enhance the characteristics of electrified cars. Compared to similar models with traditional engines, these cars have a heavier weight and very high levels of torque that is delivered instantly. Pirelli Elect technology is designed to enhance the performance of these vehicles, without compromising durability of the tyre. When choosing tyres for electric vehicles, there are also two other factors to consider: noise (both inside and outside the passenger compartment) and battery range.

PIRELLI'S NEW RUNFORWARD TECHNOLOGY

Pirelli's new RunForward technology, which makes its debut in the P Zero E, is designed to maintain control of the car in the event of a puncture and allow journeys to continue. This system consists of reinforcing panels on the internal and external sidewalls of the tyre that support the structure and allow maximum speeds of 80kph for up to 40 kilometres, even with zero pressure****. Thanks to vehicle dynamics simulations, the position and shape of these structural reinforcements have been optimised to ensure resistance when running with a flat tyre, while still maintaining an A rating for rolling resistance. The structure and compounds of tyres equipped with Pirelli RunForward technology consequently deliver driving and acoustic comfort comparable to a traditional tyre, while still keeping rolling resistance low. This technology was designed in particular for battery electric vehicles, which require quiet tyres and often don't come with a spare wheel due to the presence of the batteries. Another advantage of Pirelli RunForward tyres is that there is no need to have special rims to benefit from all the advantages of this technology.

The new Pirelli P Zero E tyre, which enters the range in September alongside the existing products, will be initially available in 17 sizes for the aftermarket from the second half of 2023. Development of specific versions for selected models from premium and prestige carmakers over the next few months is already underway.

Pirelli Press Office
Tel. +39 02 6442 4270



pressoffice@pirelli.com – www.pirelli.com

* Thanks to a combination of physical segregation and mass balance approach. Depending on tyre size, bio-based and recycled content ranges between 29-31% and 25-27% respectively. Bio-based materials are natural rubber, textile reinforcements, bio-chemicals, bio-resins and lignin, while recycled materials are metallic reinforcements, chemicals and - through mass balance - synthetic rubber, silica and carbon black. (ISO 14021)

** Size 235/45R18 (IP 42865) compared to the same size of the previous generation product (PZ4 IP 27429) according to ISO 14067 and ISO 14026, verified by Bureau Veritas.

*** PZero E 235/45R18 (IP 42865) compared to the same size of the previous generation product (PZ4 IP 27429)

**** Pirelli internal tests. Tyres equipped with RunForward technology have successfully reached 40 kilometres with zero pressure. The tests were carried out on the most heavily used wheel in the following circumstances:

- Sizes: 235/40R19 96Y XL, 235/45R18 98W XL, 255/45R19 104Y XL

- Weight on tyre: up to 627kg

- Vehicle weight up to: 2.186kg