

TAKING THE AIR OUT OF TIRES TO IMPROVE AUTOMOTIVE SAFETY

Non-pneumatic technology has tremendous potential to enhance motor vehicle safety by reducing risks associated with improper tire pressure, which may cause tire failures, skidding or loss of control, and increased stopping distance.



► Michelin Uptis is an airless mobility solution for passenger vehicles, which reduces the risk of flat tires and tire failures that result from punctures or road hazards.

► The breakthrough airless technology of the Michelin Uptis also eliminates the need for regular air-pressure checks and reduces the need for other preventive maintenance.

► Michelin Uptis is well-suited to new forms of mobility, especially autonomous and electric vehicles.

► Since Uptis was first announced in June 2019, Michelin has received multiple prominent recognitions for its advancement in airless tire technology, including the 2020 Tire Technology of the Year award at the global Tire Technology Expo¹, a Golden Steering Wheel Award in Germany², a COYOTE Automobile Award in France and Autonomous Vehicle Technology – Autonomy Connectivity Electrification Mobility Services Award in the United States³.

A NEW STEP TOWARD SAFETY AND SUSTAINABLE MOBILITY IS MOVING INTO THE MAINSTREAM.

Today, tires are condemned as scrap due to flats, failures or irregular wear caused by improper air pressure or poor maintenance. These issues can cause crashes, create congestion on the roads and result in large amounts of tire waste. The majority of these tire-related problems could be eliminated with the transition to non-pneumatic solutions.

Airless wheel assemblies could become the next transformational advancement in vehicle safety and technology. Airless solutions eliminate the risks of flats and rapid air loss due to punctures or road hazards. By removing the air from the tire, airless solutions also reduce irregular wear or other performance degradation due to under-inflation or over-inflation.

Michelin has developed the state-of-the-art, non-pneumatic tire solution: the Unique Puncture-Proof Tire System ("Uptis"). Uptis is an airless wheel assembly that delivers performance on par with conventional "zero-pressure" pneumatic tires, and also provides safety, maintenance and environmental benefits. In an ongoing co-development program, Michelin and General Motors aim to deliver this new technology as an available option to consumers as early as 2024.

The Uptis airless design eliminates the need for regular air-pressure checks and reduces other regular tire maintenance as well, which also makes it ideal for the vehicles of tomorrow – ranging from self-driving vehicles to all-electric and shared-service cars, whose occupants may not be expected to replace a flat tire.

Michelin has been working with non-pneumatic solutions for nearly 20 years. The Company introduced the first commercial airless offering for light construction equipment, the MICHELIN® TWEEL® airless radial solution. Michelin has continued its innovations to expand its portfolio of airless technologies for non-automotive applications, while also advancing this technology for passenger vehicles. Uptis balances highway speed capability, rolling resistance, mass, comfort and noise.

Continuing Uptis' progression to market, in April 2020, the U.S. Tire and Rim Association approved the engineering and design guide for non-pneumatic tire and wheel assemblies, which advances the broad deployment of non-pneumatic tires.

Michelin is a company that thinks long-term about consumer safety, consumer value and sustainable mobility. The introduction of airless mobility solutions for passenger cars represents the next critical advancement in automotive safety and performance.

VISIT MICHELINMEDIA.COM/MICHELIN-UPTIS for more information about Michelin's non-pneumatic solution, Uptis.

(1) <https://www.tiretechnology-expo.com/en/awards-2020.php>
(2) <https://www.rubbernews.com/tire/michelin-uptis-wins-golden-steering-award-innovation>
(3) <https://www.tyrepress.com/2019/12/innovation-awards-for-michelin-airless-prototype-tire/>
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