

(Webinar presskit) Getting a better grip on the UHP tires market

Goodyear zooms in its Eagle F1 Asymmetric 3 summer tire

Brussels, Belgium, March 24, 2016— Next to technology and innovation, performance was on the minds of all journalists attending this year's Geneva Motor Show. It is a fact: performance is no longer reserved for luxury and high-end performance cars. Mainstream cars have irreversibly entered the game, as one of the many effects of motorization. Goodyear has taken on the challenge by delivering a new Ultra High Performance tire — the Eagle F1 Asymmetric 3, fitted by leading car manufacturers, such as Volkswagen.

Three months after it successfully introduced the Eagle F1 Asymmetric 3 to the market, Goodyear has shed light, during a dedicated webinar, on the UHP tire segment, on its place in the EMEA market, as well as on the engineering behind its tire. The webinar's main insights have been captured below.

1. Context

1.1. Impact of the car market on the tire market

We cannot speak of the tire market without first shedding light on the car market¹. Over the last year, we noticed an overall increase of the car park volume in a relatively even manner for what large, luxury and executive cars are concerned, whereas the evolution of medium cars has been quite unstable, as illustrated below.



Until recently, this would have been reflected by a parallel evolution of the different tire segments markets. However, we see that, since 2013, the demand for UHP tires (which can stand speeds exceeding 240 km/hour) is no longer driven by the sole car segment (such as luxury or performance cars). Motorization has indeed also become a decisive factor, resulting in increasingly more "medium cars" also requiring UHP tires. The Golf GTI provides a very telling example of this evolution, as shown on the chart below.

¹ Global Insight / IHS Mach 2015

Performance - ea	rlier and today			
Golf I GTI 185/60R14 T 195/50R15 H		GTI	Golf VII GTi 225/45R17 W	
1976	1991		2013	Bassan far avalution
Characteristics	Goir I	Goir III	Goir VII	Reason for evolution
vvidtn	165	195	225	power & higher speed
Ratio	60 🗪	50 🗪	45	Improving torsional rigidity for better handling
Rim	14 🗪	15	17	More room for larger brakes due to higher speed capability
	T met	H m	W	Increase speed capability due to more

It is therefore to be expected that the number of tires coming from OE with higher speed ratings will increase, as small engine cars get higher horsepower due to advances in technology.

1.2. The place of UHP tires in the broader tire market

Summer tires have been heavily stroke by the economic crisis. But compared to standard and high performance tires, the regression of UHP tires was relatively contained². This trend is reflected in growth projections, with an expected compound annual growth rate of between 3 and 5% from 2015 to 2020 for the UHP tires market. The UHP segment is clearly a growth market.

² Goodyear Internal Data

1.3. Market's expectations

"Braking is the number 1 feature that UHP consumers are looking for in tires, followed by good wet grip and dry handling"

The main explanation for this market behavior is to be found with what our target consumers expect from tires in general. For Goodyear, we look specifically at so-called *Trust- and Care seekers*, who score higher than the total sample on safety needs. Indeed, a survey³ outlined the following benefits as top 5 consumer's requests, thus explaining the remarkable evolution of the UHP tires market:

- Braking distance on wet and dry roads;
- Grip on wet roads;
- Better mileage;
- High speed braking;
- Good value for money.

2. The Eagle F1 Asymmetric 3

Goodyear has a proud tradition of innovation that helps fulfilling the current and future needs of OE manufacturers and consumers across the world. It's therefore with great pride that we showcased our latest innovation in the successful Eagle product family, the Eagle F1 Asymmetric 3, during the Geneva Motor Show beginning of this month

2.1. Key benefits

Goodyear's team of engineers worked over 36,000 hours on the development of this new summer tire. Subsequently, the Eagle F1 Asymmetric 3 passed more than 5000 tests, covering a total of 330,000 kilometers. The new or upgraded key technologies can be visualized in three parts of the tire (the pattern, the compound and the construction), resulting in a reliable Ultra High Performance tire, offering the following key benefits:

³ TNS UK – Consumer Needs Research 2014

- **Braking distance**: the Eagle F1 Asymmetric 3 is equipped with the Active Braking Technology that increases the contact surface when braking, meaning shorter braking distances.
- **Grip**: the grip booster compound with adhesive resin ensures the tire sticks to the road.
- **Steering**: compared to its predecessor, the Eagle F1 Asymmetric 3 has a stronger lightweight construction, which improves handling, cornering performance fuel efficiency and slows down tread wear.

Benefits	Shorter braking	Increased grip for	Steering precision and
	distance	handling and control	durability
Technology	ActiveBraking	Grip Booster	Reinforced Construction
	The long should be based in the range of the range of the long should be based in the range of the long should be based in the range of the range		
Area	Tread pattern	Compound	Construction
Features	Active Braking	New Grip Booster	New Reinforced
	Technology increases	compound, with	Construction
	the contact surface and	adhesive resin for	technology delivers a
	grip when braking.	stickiness, delivers	stronger lightweight
	Increased contact	maximum grip for	construction improving
	surface with the road	shorter braking and	handling, cornering
	means shorter braking	performance handling	performance, tread wear
	distance	on wet and dry roads	and fuel efficiency

The table below illustrates the technology behind these benefits.

 Active Braking 	Grip Booster	 New cords in the
Technology	Compound with	various layers of the
 Long shoulder blocks 	adhesive resin for	construction
	stickiness	UHP Cool Cushion
		Layer
		 Optimized cavity and
		pattern
		 Asymmetric bottom
		layer

2.2. Successful testing

Our advanced technology⁴ was recognized by independent tests, showcasing strong results and confirming our leader's position.

Firstly, the Eagle F1 Asymmetric 3 scored extremely well compared to its tested competitors with the independent **TÜV Süd Benchmark Test**, particularly for:

- Wet braking: 2.6 meters shorter braking distance on wet roads, i.e. 9% better performance⁵;
- Dry braking: 1.3 meters shorter braking distance on dry roads, or 4% better performance⁵;
- Wet handling: 4% better wet handling⁵.



⁴ Compared to its predecessor

⁵ Compared to average performance of 3 latest (available at the time of the test) designs from main competitors in UHP segment (Michelin Pilot Sport 3, Bridgestone Potenza S001, Continental Sport Contact 5). Tested by TÜV SÜD Product Service GmbH in Sept – Oct 2015 by order of Goodyear Dunlop, Tire Size: 225/45 R17 91Y; Test Car: VW Golf; Test Locations: Mireval (F), Papenburg (D), TÜV SÜD PS Garching (D); Report No. 713066268.

The same test results also showed a 10.9 % better rolling resistance compared to the average of the three tested competitors, which represents the second best rolling resistance performance of the tire brands tested⁶.

Additionally, the **independent organization DEKRA's test** proves that the Eagle F1 Asymmetric 3 offers 31% better tread wear performance compared to the three main competitors⁷, resulting in an impressive 11,528 additional kilometers.

2.3. Fitment

The Goodyear Eagle F1 family is fitted by leading car manufacturers. At the moment, the Goodyear Eagle F1 Asymmetric 3 has already 41 sizes on the market.



⁶ Scores for rolling resistance: Continental Sport Contact 5 – 101.6; Goodyear Eagle F1 Asymmetric 3 – 100; average of leading competitors – 89.1. Part of test specified above with report No. 713066268.

⁷ Compared to average performance of 3 latest (available at the time of the test) designs from main competitors in UHP segment (Michelin Pilot Sport 3, Bridgestone Potenza S001, Continental Sport Contact 5). Tested by DEKRA in Sept – Oct 2015 by order of Goodyear Dunlop. Tire Size: 225/45 R17 91Y; Test Car: VW GOLF VII - 150 CV; Test Locations: open road and test circuit FP01 with test conditions described in test #2015-137.

3. Practical and tire-testing info

The tire has been available since December 2015 in 41 different sizes (ranging from 17 inches up to 20 inches) and the range will be completed by March 2016.

4. Annexes

- Eagle F1 Asymmetric 3 launch press release
- You can download visuals and videos on our newsroom http://news.goodyear.eu

For more information on Goodyear and Dunlop, please follow us on Twitter

@goodyearpress.

About Goodyear

Goodyear is one of the world's largest tire companies. It employs approximately 67,000 people and manufactures its products in 50 facilities in 22 countries around the world. Its two Innovation Centers in Akron, Ohio and Colmar-Berg, Luxembourg strive to develop state-of-the-art products and services that set the technology and performance standard for the industry. For more information about Goodyear and its products, go to: www.goodyear.eu.