

MICHELIN *Pilot Alpin*

MICHELIN  **LATITUDE**
ALPIN

MICHELIN: Expertise in Winter Safety

Press Kit
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The MICHELIN Pilot Alpin and MICHELIN Latitude Alpin,
two core components in a changing market

The new tire for sedans and sports coupes.

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Safely providing power, winter after winter

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MICHELIN: Expertise in Winter Safety

Michelin is premiering its new MICHELIN Pilot Alpin and MICHELIN Latitude Alpin, two winter tires for high-performance cars and SUVs. Scheduled to begin arriving in European replacement markets in spring 2012, the tires deliver unparalleled results in terms of safety, mobility and longevity.

To develop this performance balance and deploy the most appropriate technologies, Michelin conducted preliminary studies and invited more than 4,000 motorists in Germany, France, Russia, Sweden and Canada to describe their winter driving experiences. In this way, nearly 12,000 loss-of-control situations were compiled and analyzed. Almost all driving conditions were covered, including when roads are:

- Covered with fresh, powdery snow.
- Covered with hard, compact snow.
- Covered with glistening, icy snow that has melted, then frozen again.
- Covered with melting, slushy snow.
- Partially covered with snow. The road can be seen in places where tires have passed.

➤ A shared commitment to safety

- **Winter safety: a necessity for motorists**

These studies conducted directly with motorists have revealed an important point, which is that around the world, the priorities of drivers of high-performance cars and SUVs change depending on the season. In summer, driving enjoyment is primordial, allowing them to create an emotional relationship with their vehicle. In winter, **safety** is their main concern and driving enjoyment is relegated to a lower level. Some motorists cannot even imagine getting pleasure out of winter driving. They want to be able to brake, stop and corner without having to worry. They want **mobility**, which especially for SUV drivers means the ability to start on an uphill. Basically, they want to be in **control** of their vehicle, which means being able to drive on all types of roads and surfaces.

- **Winter safety: a constant concern for carmakers**

Automobile manufacturers never compromise on this point and have made safety one of their core values. The importance that they attach to tires – and to MICHELIN tires in particular – is part of this commitment. Michael Haupt, Manager of Tire Development at Porsche, describes this concern in the following terms: “For our winter tires, we put the focus

on driving safety and stability and on braking distances, regardless of whether roads are wet, icy or snow-covered.

- **Winter safety: an imperative for racing drivers**

For the Michelin Group, motorsports are an integral part of the research and development process. While the Group allocates more than €550 million a year to its Technology Center, it also uses motorsports as a real-world laboratory for validating new technologies in the most demanding conditions. And what are drivers demanding? In short, they need tires that deliver the maximum in terms of grip, consistency and versatility of use.

The Monte Carlo Rally, part of the World Rally Championship, illustrates the variety of winter conditions that may confront race drivers in a single event. The circuit includes cold, dry asphalt as well as roads that are wet, snow-covered and icy. For 2012, Michelin has developed one new tire capable of delivering optimal grip in all of these conditions, thereby enhancing safety as well as driving performance.

Even an eight-time winner of the World Rally Championship, despite his talent, needs high-performance tires. Says Sébastien Loeb: “In the snow, even the world champion must have the right tires.”

According to Dave Wilcock and David Lapworth, respectively Team Principal and Technical Director of the MINI World Rally Team: “Drivers need a tire that enables them to race with confidence and push their car to the grip limit but never beyond.”

All winter tire users agree. Whether drivers of cars or powerful SUVs, automobile manufacturers, or racing drivers or team managers, all are looking for tires that are safe, meaning that they deliver grip.

The new MICHELIN Pilot Alpin and MICHELIN Latitude Alpin tires for high-performance vehicles satisfy this all-importance safety requirement. What’s more they go even farther, delivering exceptional mobility and vehicle control as well as superior total mileage. In this way, they are responding to the performance balance challenge.

The MICHELIN Pilot Alpin and MICHELIN Latitude Alpin, two core components in a changing market

Tire markets are changing, due to pressing safety and mobility needs, new regulations, car fleet overhauls, tire technology upgrades and wider access to technical tire data. As a result, winter tires are more important than ever. The new MICHELIN Pilot Alpin and MICHELIN Latitude Alpin tires are meeting these emerging expectations.

A fast-growing European winter tire market

- In **three years**, the European tire market expanded by **10%**, from **259 million units** sold in 2009 to **286 million** in 2011.
- As for the winter tire market, it grew by **50%** over the same period.
- In 2011, a total of **100 million** winter tires were sold in Europe.
- In 2011, winter tires accounted for **one out of three** tire sales.
- The premium winter tire segment performed even better, with **9 million tires** for premium models and SUVs sold in Europe.
- The segment has expanded by **82%** in three years.

In 2012, winter tires will be mandatory in eleven European countries

- After Finland, Norway, Sweden, Czech Republic, Latvia, Slovenia, Estonia and Lithuania, Germany made winter tires mandatory in December 2010.
- Winter tires will also be mandatory in Luxembourg and Romania beginning in 2012.
- In countries with severe winter driving conditions, new car sales are on the rise, with registrations up **8.8%** in Germany, **8.4%** in Switzerland and **8%** in Austria.

Safety is an obligation for all motorists

- In summer as in winter, **70%*** of motorists want their next car to provide maximum safety in all situations.
- **92%** of European drivers say that tires play an active role in their car's safety performance.
- **69%** of motorists say that they choose premium brand tires, a figure that has been increasing for the past five years.
- More than **50%** of consumers obtain information via the Internet before purchasing tires.

* Source: TGI Channel Planning software (2011)

- Searches on Google for information about tires have increased by a factor of [2.5](#) since 2006**, while searches for winter tires total [two million](#) clicks a month *** in Europe.

** Source: Google

*** Source: Google Adwords

The new tire for sedans and sports coupes.

The MICHELIN Pilot Alpin, Safely providing power, winter after winter



The performance of the new MICHELIN Pilot Alpin has been measured by an independent organization¹ and the tire can be considered No. 1 for safety in cold weather driving conditions¹.

Winter after winter, it delivers superior performance in three areas:

- Enhanced safety. It brakes two meters shorter on wet roads².
- Enhanced control. It sets the standard for grip when cornering in the snow and for handling on wet roads³.
- Enhanced mobility. It delivers outstanding traction on snow and ice³.

To achieve this performance balance, MICHELIN has simultaneously improved several tire components, including the tread pattern and rubber compound (see “Technical Close-up” below). Two treads were developed to meet the technical requirements of sports vehicles.



An asymmetrical tread pattern has been optimized to meet the needs of the wide range of powerful models in today's market.



A directional tread pattern developed in partnership with Porsche



¹ The MICHELIN Pilot Alpin PA4 was rated highest overall in terms of braking, traction, handling and grip when cornering on wet, icy and snow-covered surfaces, compared with its main competitors. Tests conducted by TÜV SÜD in 2012 on 245/40 R 18 V tires available and purchased in the European market in November 2011.

² On average, compared with its main competitors in Europe (when decelerating from 80-0 km/h). Tests conducted by TÜV SÜD in 2012 on 245/40 R 18 V tires available and purchased in the European market in November 2011.

³ Compared with its main competitors in Europe. Tests conducted by TÜV SÜD in 2012 on 245/40 R 18 V tires available and purchased in the European market in November 2011.

The MICHELIN Latitude Alpin, Safely providing mobility, winter after winter



and ice³.

The performance of the new MICHELIN Latitude Alpin tire for premium SUVs has also been measured by an independent organization. It can be considered **No. 1 for safety in cold weather driving conditions¹, winter after winter**, as it delivers superior performance in three areas:

- Enhanced safety. It brakes two meters shorter on snow-covered roads and four meters shorter on icy roads².
- Enhanced control. It sets the standard for grip when cornering on snow-covered or icy roads³.
- Enhanced mobility. It delivers the best traction on snow

When designing the tire (see “Technical Close-Up” below), the team focused simultaneously on tire architecture, the tread pattern and the rubber composition. The tire’s robustness has been adapted for SUV use and it delivers superior handling, even when carrying heavy loads. It is also highly resistant to sidewall impact.

The tread features a large number of motifs, with more biting edges and sipes than the previous-generation tire. The 2012 version of the MICHELIN Latitude Alpin has up to 40% more biting edges and 75% more sipes than its predecessor.

¹The MICHELIN Latitude Alpin LA2 was rated highest overall in terms of braking, traction, handling and grip when cornering on wet, icy and snow-covered surfaces, compared with its main competitors. Tests conducted by TÜV SÜD in 2012 on 245/40 R 18 V tires available and purchased in the European market in November 2011.

²On average, compared with its main Europe competitors (when decelerating from 50-0 km/h). Tests conducted by TÜV SÜD in 2012 on 235/65 R 17 H tires available and purchased in the European market in November 2011.

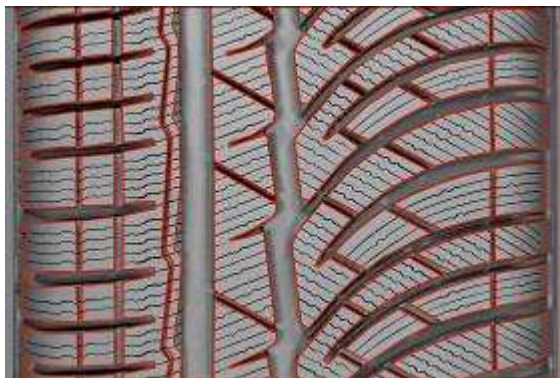
³On average, compared with its main competitors in Europe. Tests conducted by TÜV SÜD in 2012 on 235/65 R 17 H tires available and purchased in the European market in November 2011.

Shared technologies for two ranges of winter tires destined for high-performance vehicles

For the new MICHELIN Pilot Alpin and MICHELIN Latitude Alpin tires, the Group's R&D teams used a conception of winter tires design called Ridge-n-Flex which represents an optimal alliance of two elements:

- a **heavily grooved tread** pattern for greater grip on winter roads, **with interlaced elements** (StabiliGrip sipes) to ensure the optimum rigidity for greater driving precision
- and a **flexible rubber compound** (HelioCompound 3G) for better grip on wet and icy roads which keeps its elasticity even at low temperatures.

➤ A heavily grooved tread pattern



It combines excellent traction with superior snow and ice braking performance. The tread patterns feature more biting edges* and more sipes**

*Compared with the previous generation:

- up to **74% more** for the MICHELIN Pilot Alpin.
- up to **40% more** for the MICHELIN Latitude Alpin.

**Compared with the previous generation:

- up to **135% more** for the MICHELIN Pilot Alpin.
- up to **75% more** for the MICHELIN Latitude Alpin.

➤ Intersecting sipes

The **StabiliGrip** sipes are three-dimensional, deeply grooved and placed at variable angles so as to:

- **have more edges** for greater traction
- **break the water film** and to dry the surface for better grip
- **increase rigidity** of the tread blocks for a better driving precision.



➤ A new generation of winter rubber compound

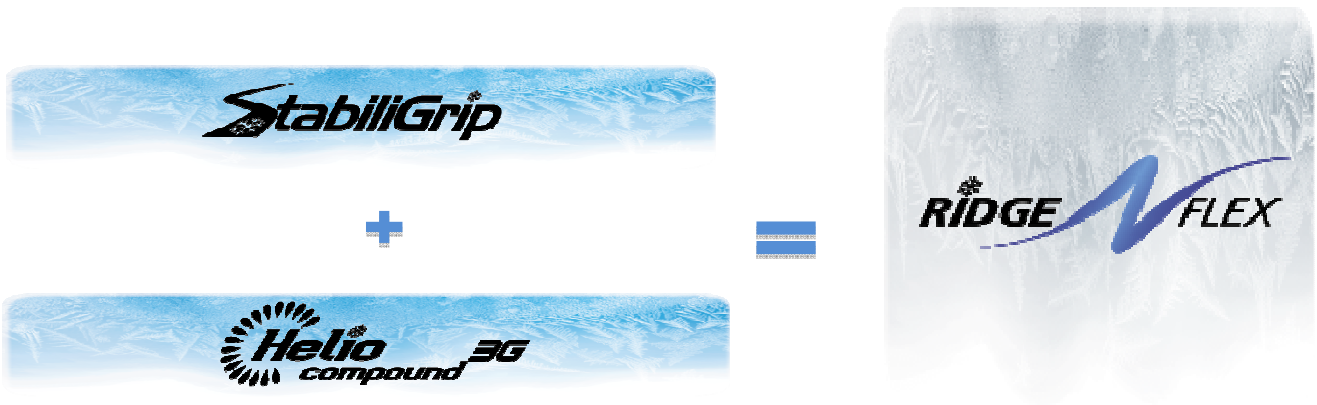


HelioCompound 3G is the third generation of the silica based rubber compound using sunflower oil*, for better softness in cold weather.

The compound improves the grip of tires on wet, icy and snow-covered roads.

*Michelin patent

Both of Michelin's new high-performance winter tires integrate this conception.



In a glance

The MICHELIN Pilot Alpin and MICHELIN Latitude Alpin deliver the best winter performance balance in terms of safety, mobility and longevity, thanks to their integration of Ridge-n-Flex conception.

The new high-performance MICHELIN Pilot Alpin and MICHELIN Latitude Alpin tires are part of Michelin's winter ranges, which are easy to understand, available for all vehicles, and adapted to all types of use and climates.



The tires will be brought to market throughout Europe in spring 2012, the year in which Europe tire labeling is scheduled to take effect (in November). The labels will provide information on three areas of tire performance: energy efficiency, wet grip and noise.

Michelin Group: Milestones

For more than a century, Michelin has dedicated all its expertise and innovation to enhancing mobility for motorists around the world.

1889: Founding of **Michelin et Cie**.

1891: Michelin files its first patents for removable and repairable tires.

1895: Michelin introduces Éclair, the first car to be fitted with pneumatic tires.

1898: "Birth" of **Bibendum**, the Michelin Man.

1900: First **MICHELIN guide** published.

1905: Introduction of the Michelin Sole tread with hobnails to improve tire grip and durability.

1910: First 1/200,000 scale Michelin **road map** published.

1913: Michelin invents the **removable steel wheel**.

1923: First **low-pressure car tire** (2.5 bar).

1926: Michelin creates its first **Green Guide for tourists**.

1930: Michelin files a patent for the **integrated tube tire**.

1938: Michelin launches **Metalic, the first truck tire with a steel casing**.

1946: Michelin invents the **radial tire**.

1959: Michelin introduces the first radial tire for earthmovers.

1979: The Michelin radial tire wins the Formula 1 championship.

1981: The **MICHELIN X Air** is the first radial aircraft tire.

1989: Michelin launches the first online travel itinerary service, on France's Minitel teletext network.

1992: Launch of the fuel-efficient **MICHELIN ENERGY™ tire**.

1993: Michelin invents the new C3M tire manufacturing process.

1995: The US space shuttle lands on Michelin tires.

1996: Michelin invents the vertically anchored PAX System tire.

1998: The first **Michelin Challenge Bibendum**, the world's leading clean vehicle event.

1998: The Michelin Man's **100th birthday**.

2000: Michelin Man voted best logo of all time by an international jury.

2001: Michelin brings to market the world's largest earthmover tire.

2003: Launch of Michelin brand automotive accessories.

2004: New corporate signature introduced: "**Michelin, a better way forward.**"

2004: Launch of the MICHELIN XeoBib, the first agriculture tire that operates at constant low pressure.

2005: Michelin provides tires for the new Airbus A-380 aircraft - Launch of the MICHELIN Power Race, the first dual compound racing tire approved for road use.

2006: Michelin revolutionizes truck tires with MICHELIN Durable Technologies.

2007: Launch of the new **MICHELIN ENERGY™ Saver** tire, which reduces fuel consumption by nearly 0.2 liters per 100 kilometers, thereby lowering carbon emissions by almost 4 grams per kilometer.

2008: Introduction of the new MICHELIN X ENERGY™ SAVERGREEN truck tire.

2009: 100th edition of the MICHELIN guide France.

2010: Market launch of the MICHELIN Pilot Sport 3 and MICHELIN Pilot Super Sport tires.

2012: Launch of the **MICHELIN Primacy 3** tire in Europe.

2012: European launch of two new high-performance winter tires, the **MICHELIN Pilot Alpin** and **MICHELIN Latitude Alpin**.

Michelin Group: Key Figures

Founded:	1889
Production base:	70 plants in 18 countries
Number of employees:	115,000 worldwide
Technology Center:	More than 6,000 researchers on three continents: North America, Europe and Asia
Annual R&D budget:	Over €550 million
Annual output:	176 million tires produced, over 10 million maps and guides sold in more than 170 countries, and 875 million itineraries calculated by ViaMichelin
2011 net sales:	€20.7 billion

An extensive portfolio of brands covering all market segments: MICHELIN, BFGoodrich, Kleber, Uniroyal, Riken, Taurus, Kormoran, Warrior, Pneu Laurent, Recamic, MICHELIN Remix, Euromaster, TCI Tire Centers and TyrePlus.