

**HANKOOK**  
driving emotion



2012 WINNER



## **ventus S1evo<sup>2</sup> SUV**

High-end performance SUV tire

Hankook Tire & Technology



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Design concept and key sales point

High-end performance SUV tire

## The best balance between wet and dry performance!

- Shorter braking distances in dry and wet conditions.
- Excellent grip and safety when cornering.
- Enhanced fuel efficiency based on lowest rolling resistance.



ventus S1 evo² SUV  
High-end performance SUV tyre

**ventus S1 evo² SUV**

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DTM Technology

High-end performance SUV tire

# VENTUS S1 evo<sup>2</sup> SUV engineered by DTM Technology **DTM** Technology

Hankook tire is the official sponsor of DTM - the most popular international touring car series.



**ventus S1 evo<sup>2</sup> SUV**

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# ventus S1evo<sup>2</sup> SUV



## Technology icon



## Performance icon



## Technical profile

Speed symbol : V, W, Y

Tread width : 235~315

Series : 30~60

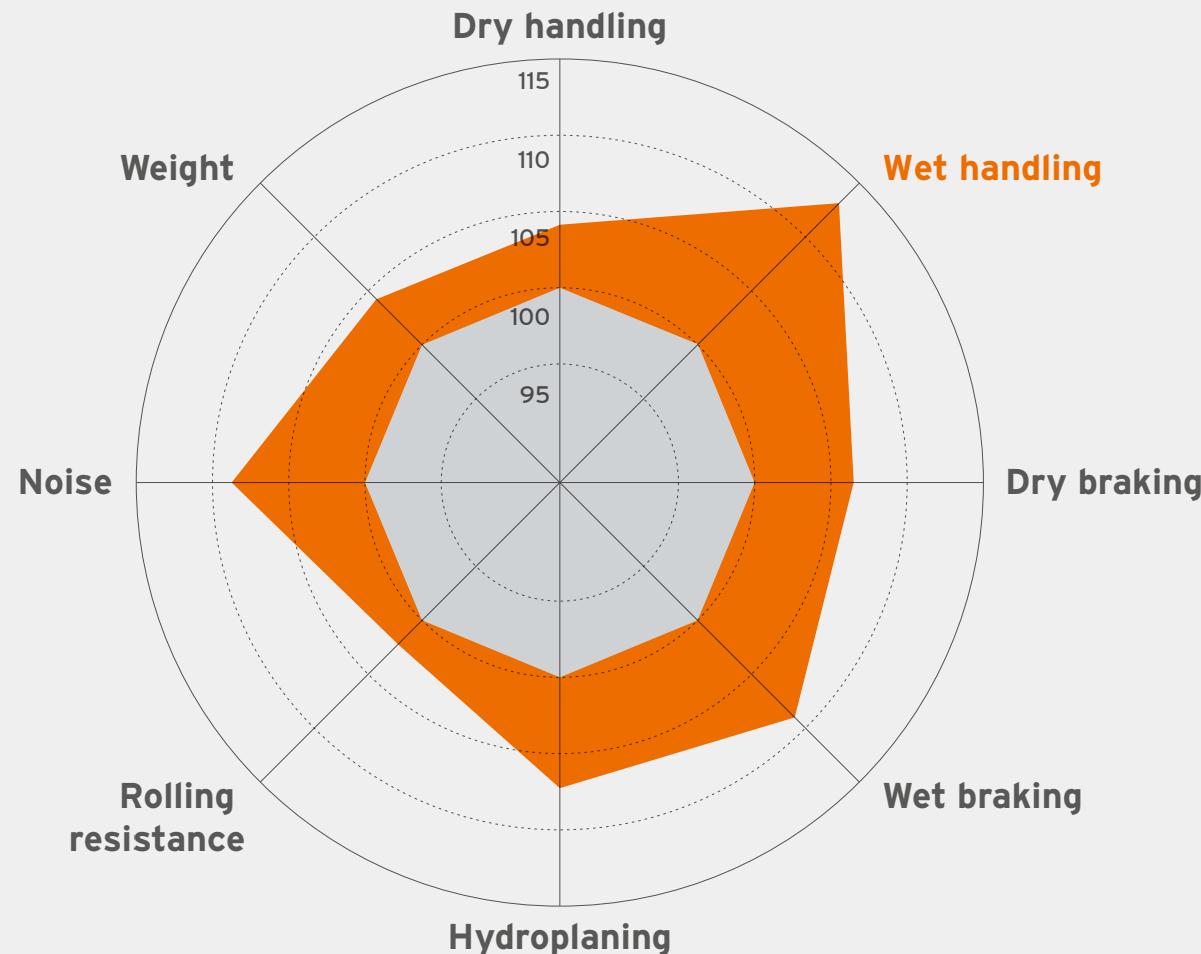
Rim diameter : 17~22

## Key performance

High-end performance SUV tire

Improvement in performance compared to predecessor.

■ Conventional  
■ **ventus S1evo<sup>2</sup> SUV**



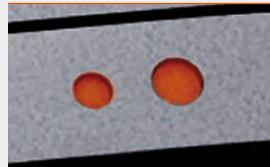
## High-end sports performance through advanced technology



## Aqua driving control

Provides superior wet driving performance through rapid drainage.

## Alignment indicator



Drivers can check the status of the vehicle alignment themselves through the IN and OUT wear check.

## Cooling system



Speeds up water drainage and improves heat radiation at high speeds.

# Intercooler

Controls excessive heat build up.

# Triple driveline



As wear progresses down to the TWI (Tread Wear Indicator), there is no loss in performance.

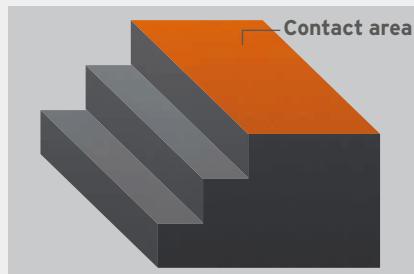
# Triple layered block

As the tire wear progresses, provides more effective traction performance.

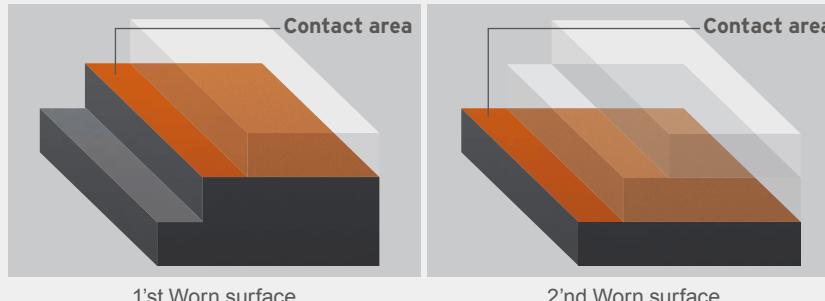
## A Triple layered block

The staircase arrangement on the outer rib blocks is designed to increase the tire contact patch with the surface as the wear rate increases.

### Before use



### After use



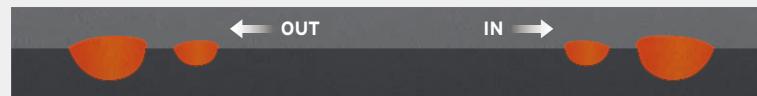
# VAI Siping System

The visual alignment indicator siping system provides an easy way to check the tire alignment. It compares the wear on the sipes located on both of the tire's shoulders, then realign as necessary.

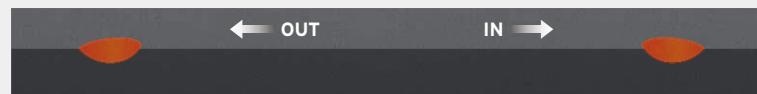
## B VAI

Indicator marks that have different depths can easily help identify the degree of tire wear.

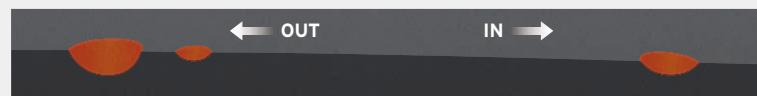
### Before use



### After use (regular wear)



### After use (irregular wear)



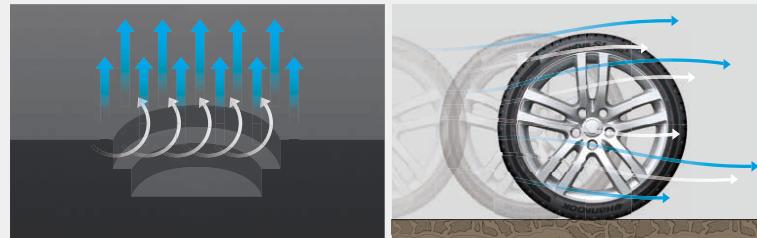
Indicator marks that have different depths can help easily identify the degree of tire wear.



# Intercooler and cooling system

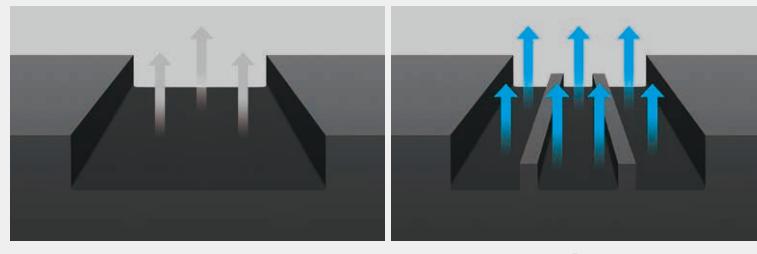
## C Intercooler

Faster drainage water channel.



## D Cooling system

Increased contact area induces the rapid release of heat and ensures excellent performance in driving conditions.



Conventional

ventus S1evo<sup>2</sup> SUV



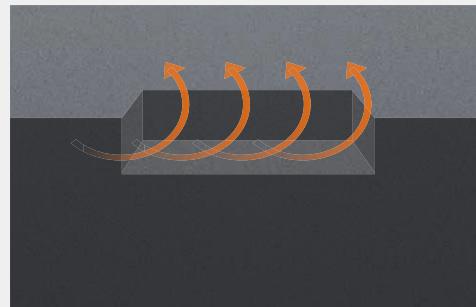
# Aero dynamic sidewall

The aero sidewall design through rectangular dimples minimises noise and vibration levels by reducing the air turbulence when driving.

## E Aero-sidewall dimple

- Sportiness is stressed with dynamic graphics.
- Rectangular dimples suggest a textile pattern similar to those found in car interiors
- The carved letters prevent crack of sidewall.
- Minimises the noise and vibration levels by reducing air turbulence when driving.

### Air turbulence



# Tire structure



## High stiffness bead filler

Better steering and handling response

## Strong single strand bead wire

Improved uniformity and tire fitting

## High grip silica compound

Improved dry/wet traction and lower rolling resistance

## Jointless full cover

Ideal tread strength

## Wide steel belt layer

Better dry and wet handling

## High density rayon and polyester carcass

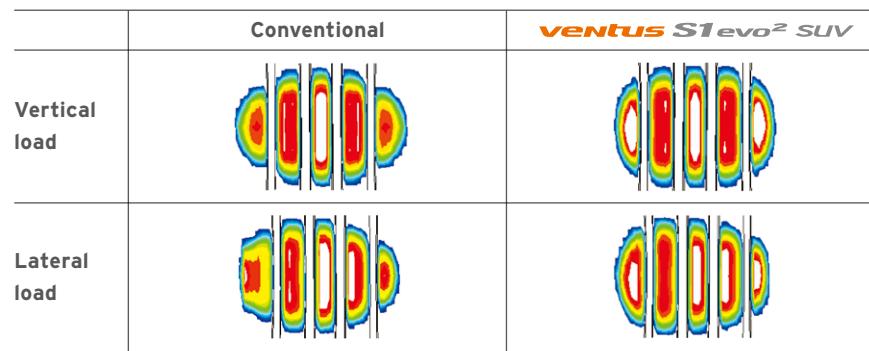
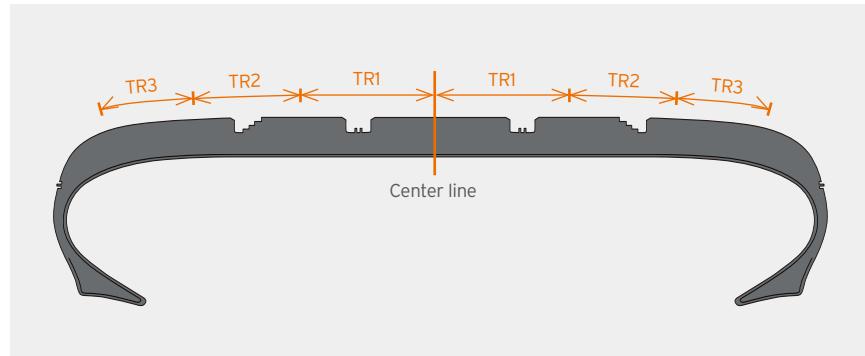
Enhanced sidewall stiffness and durability

# New profile for hydroplaning resistance

**DTM Technology**

Optimized triple tread radius system based on DTM racing profile technology ensures the best tire performance in high-speed driving condition.

## DTM Technology



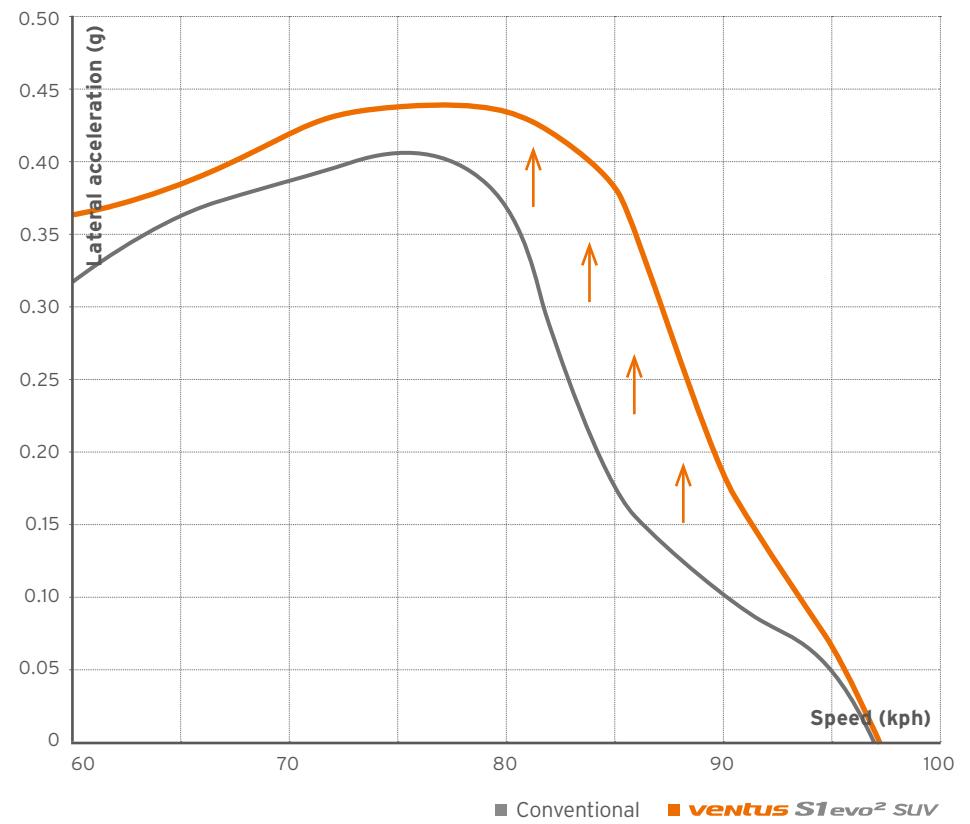
**Increased contact area**

- Excellent handling performance

**Improved shoulder roundness**

- Improved hydroplaning performance

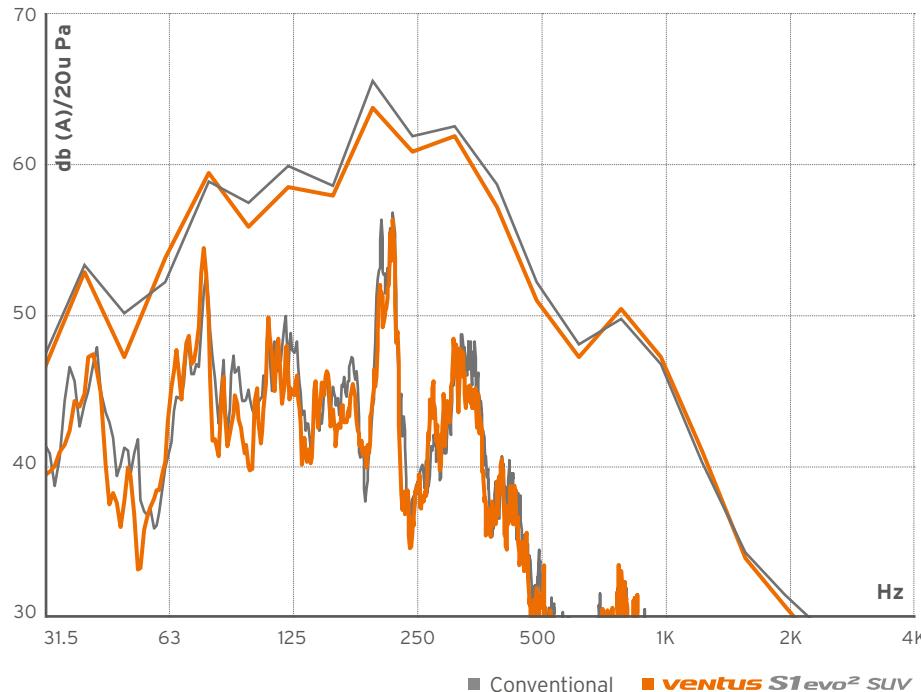
## Hydroplaning lateral G (G=gravity)



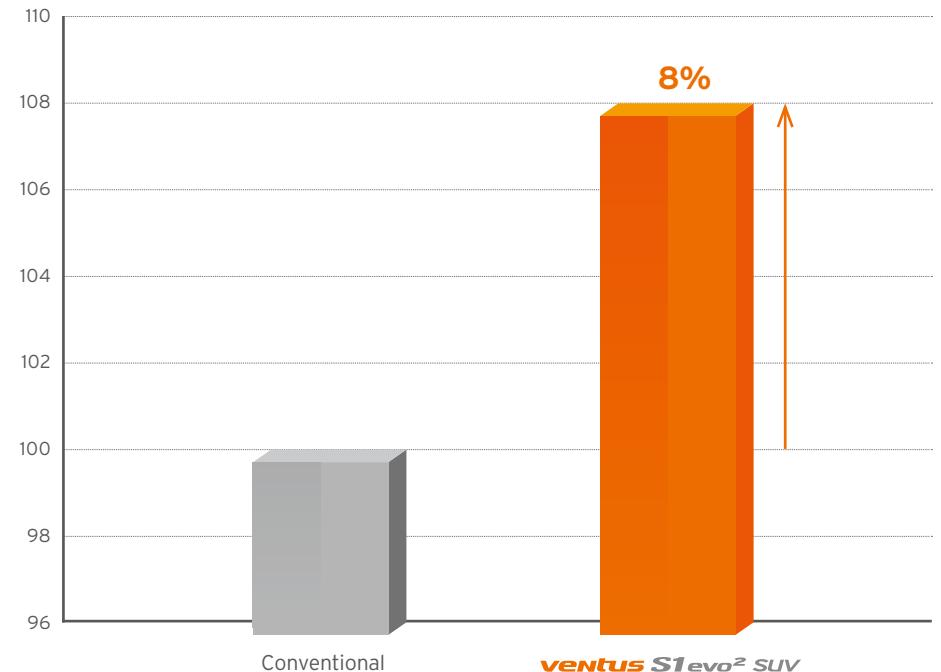
# Noise

By applying optimized pitch length and lateral groove angle, noise is reduced across the entire area compared to existing products.

**Vehicle noise measurement**



**Noise subjective testing**

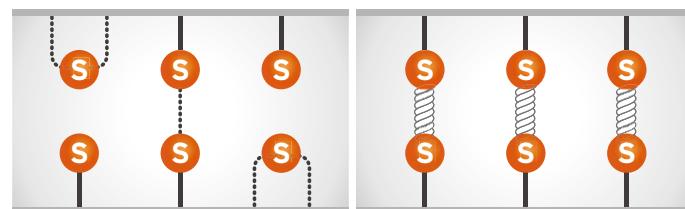


# Compound technology

By applying an optimised cross-linking system and high stirene polymer featuring high hysteresis, durability abrasion, rolling resistance and wet performance are improved.

## High stirene polymer compound

### Chemical structures

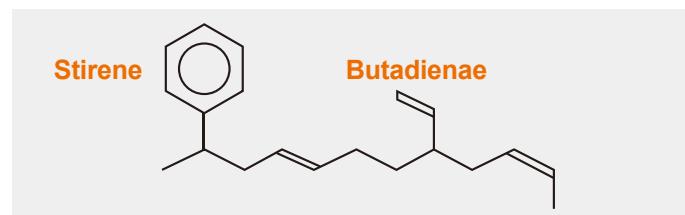


### Features



Optimised cross-link helps performance and heat aging resistance

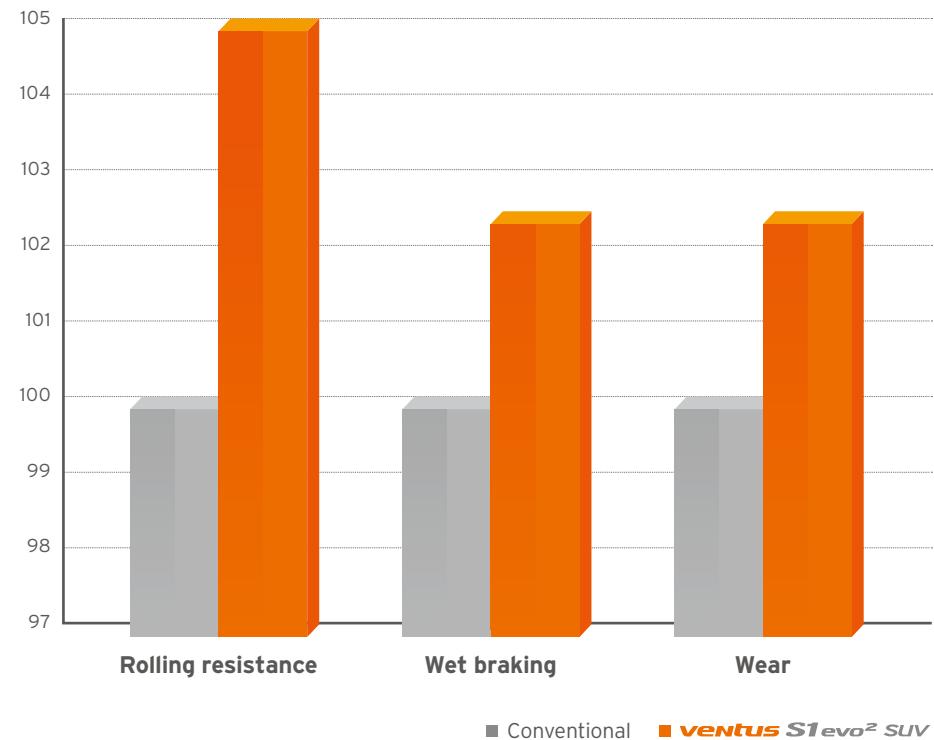
## High stirene (bulky)



High hysteresis  
High wet braking performance

**ventus S1 evo<sup>2</sup> SUV**

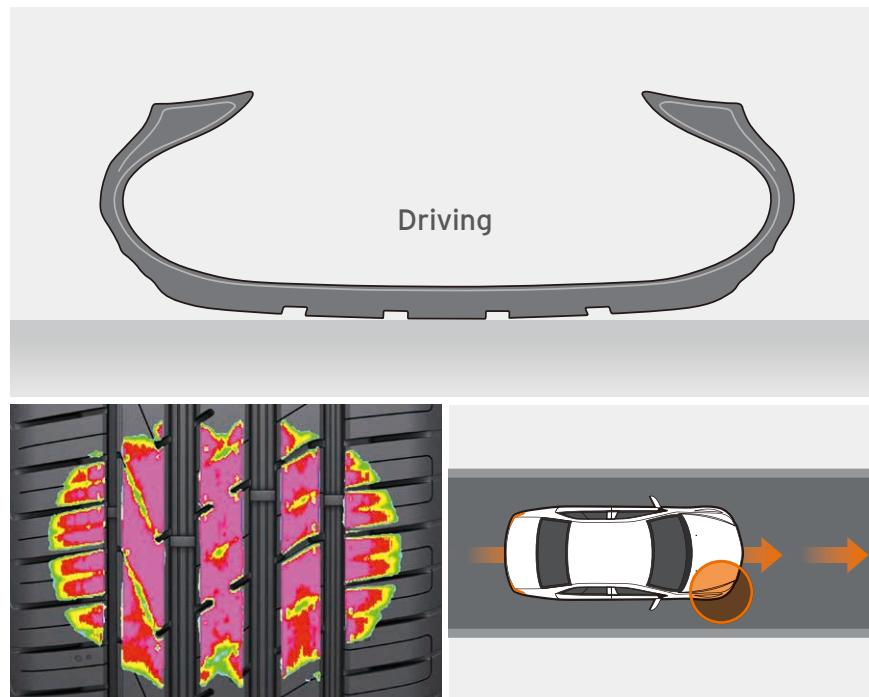
## Improved compound performances



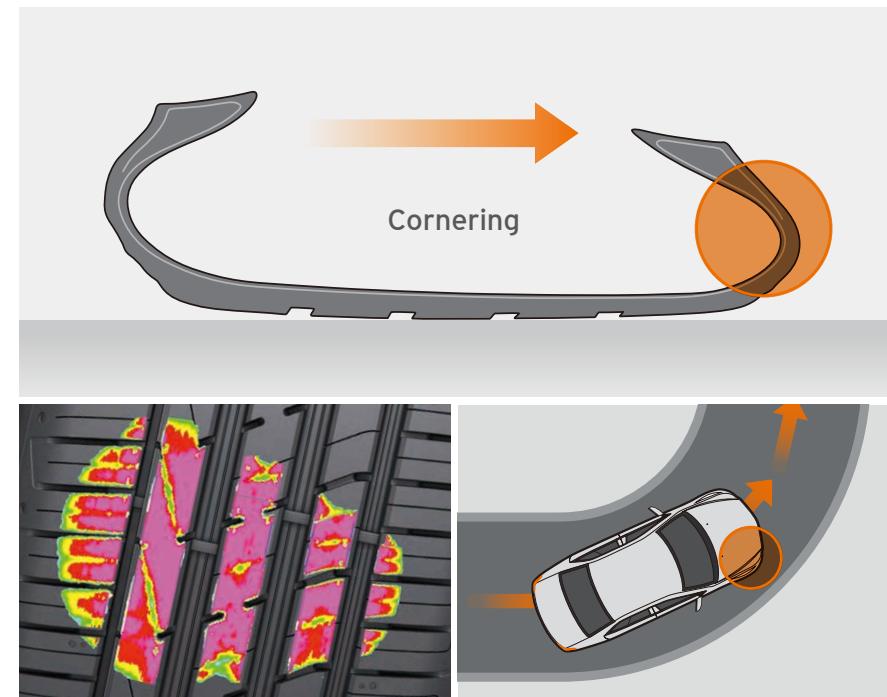
# Dry and wet performance (handling)

Even loads transfer vertically and laterally, they maintain a stable foot shape through an optimal design based on a multiple tread radius profile and equilibrium carcass line. This provides the best handling performance.

Traction force at driving



Traction force at cornering

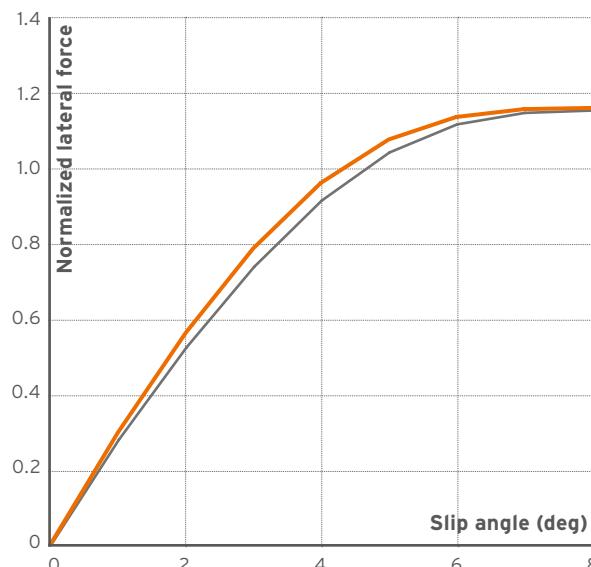


# Dry and wet performance (handling)

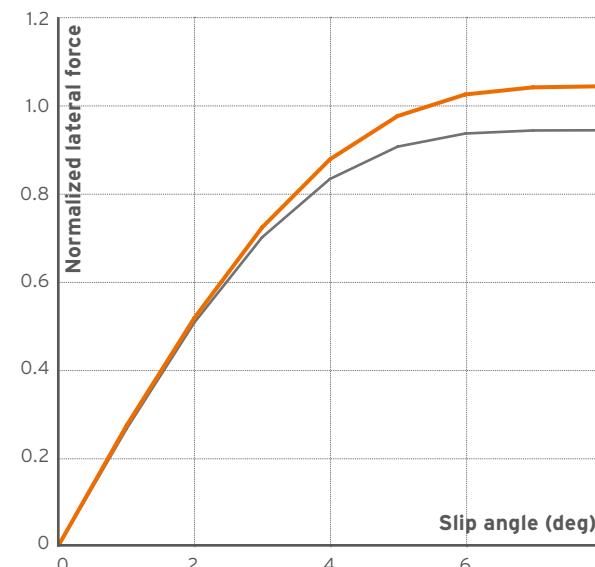
Apply a high grip compound and optimal structure to maximise the front and rear wheel grip.

Despite the grip balance of front and rear combination, a faster response is obtained compared to existing products. The maximum grip is improved.

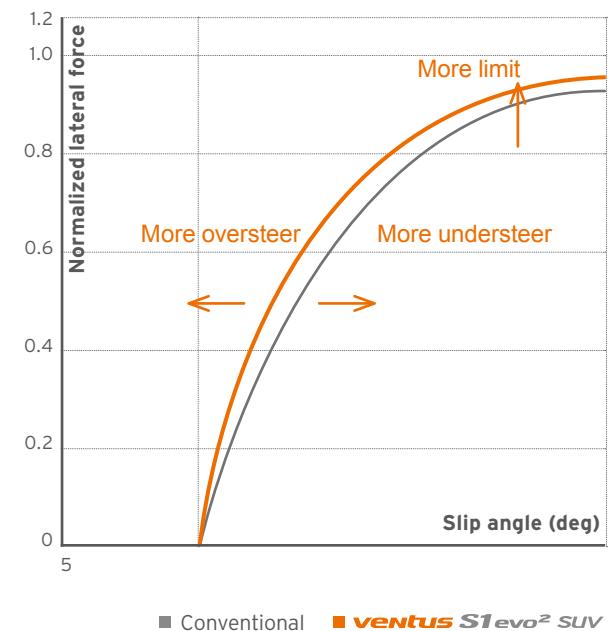
**Front lateral friction**



**Rear lateral friction**



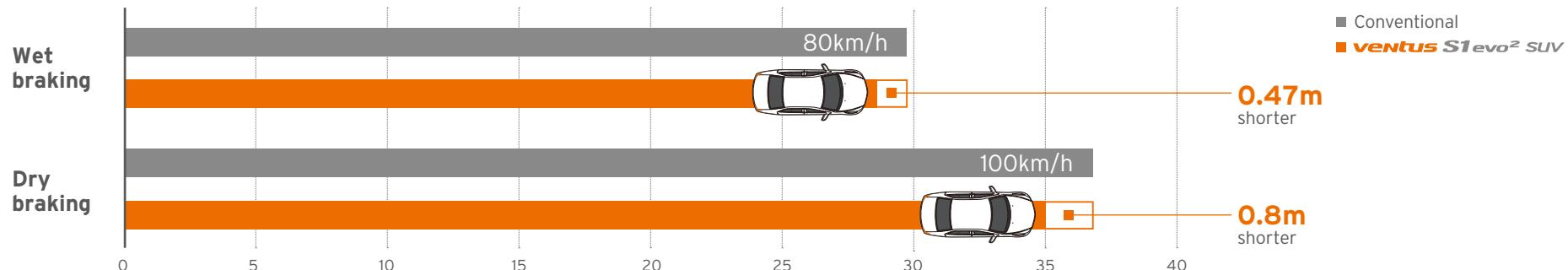
**Understeer and oversteer tendency**



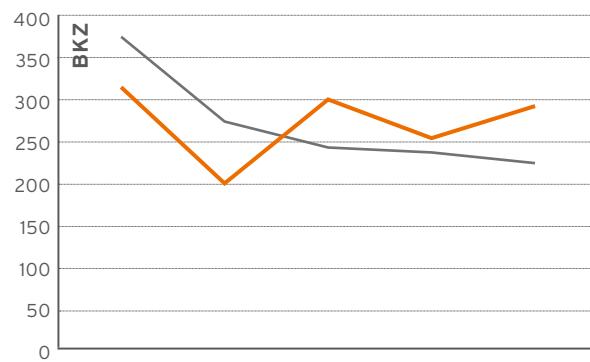
# Dry and wet performance

Extremely short braking distances are achieved on wet and dry surfaces through optimising the balance of the tread block stiffness.

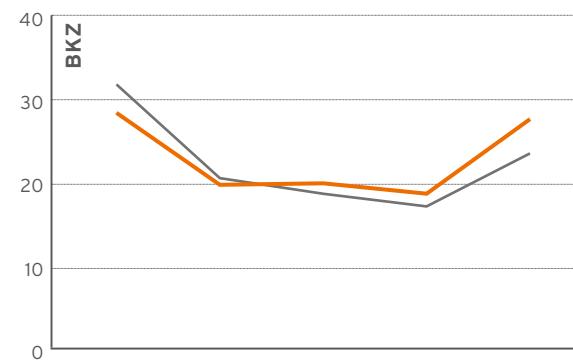
## Stopping distance



## Vertical



## Longitudinal



## Lateral

