Winter i*cept evo2 SUV

Ultra winter performance tire for 4X4s and SUVs

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Winter i*cept evo2 SUV

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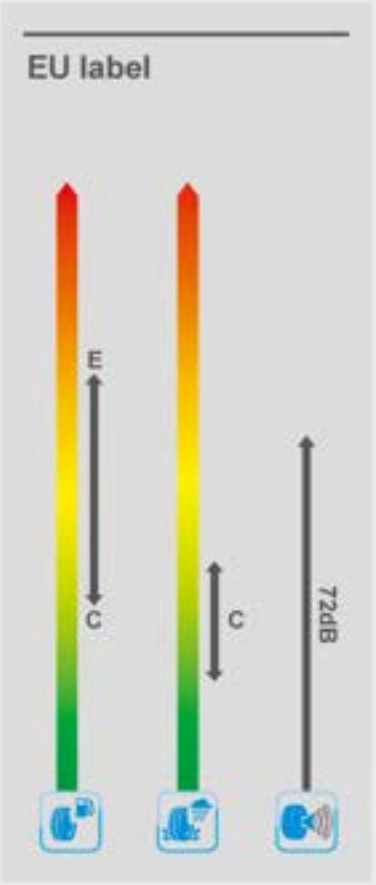
Technical profile

Speed symbol : T, H, V
Tread width : 215~295
Series : 35~70
Rim diameter : 16~21

Key performance

Improvement in performance compared to predecessor.



Optimised asymmetric pattern design for driving in all winter conditions

Optimised cube block
for snow handling

+

Snow-pick traction groove
for snow traction

+

Wide aqua grooves
for wet and slush roads

Improved snow handling performance

Enhanced braking performance on snow and wet roads

Optimised pattern design for optimal snow performance

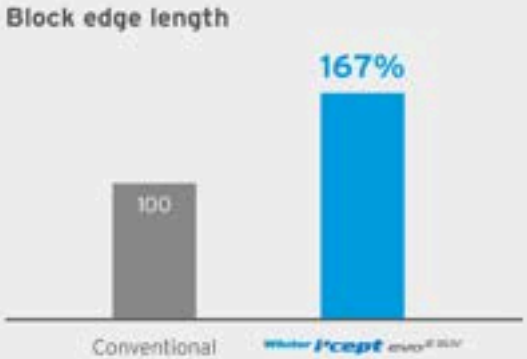
Increased pitch numbers

Pitch numbers

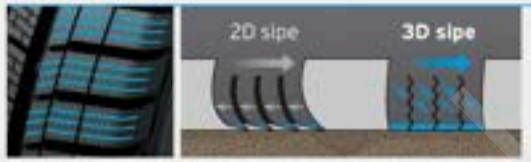
■ Conventional ■ Winter i*cept evo2 SUV

Helps effectively bite in to the snow and improve the traction performance of the tires.

Increased groove edge length



3D sipe



Provides enhanced driving stability by minimising block movement.

Increased void volume

Improves snow grip and hydroplaning by optimising the contact area.

Snow performance

Provides the best snow traction performance by increasing the biting edge through a snow-pick shaped groove.

A Snow-pick traction groove

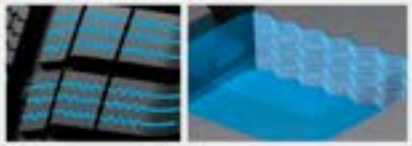
Lateral ice ax shaped grooves have a scratching effect on roads.

→ Powerful snow performance by optimised lateral groove angle.

B Zig-zag traction groove

Improves snow traction and braking performance by increasing the cross point.

C 3D winter sipe



Ensures optimal winter performance by minimizing block movement on wet and snow roads.

D Ice grip slits

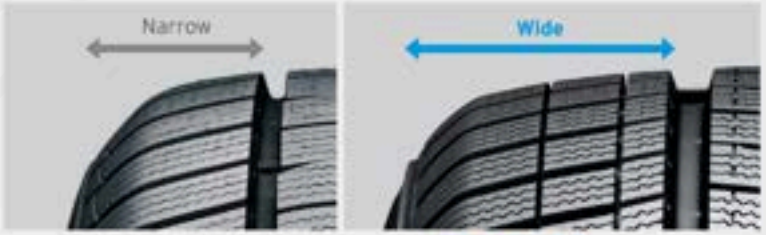
Provides cornering performance with sub slits.

Dry performance

Square shaped profile and wide shoulder blocks provide excellent steering stability.
The rectangular block shape design maintain block stiffness and improves grip when cornering.

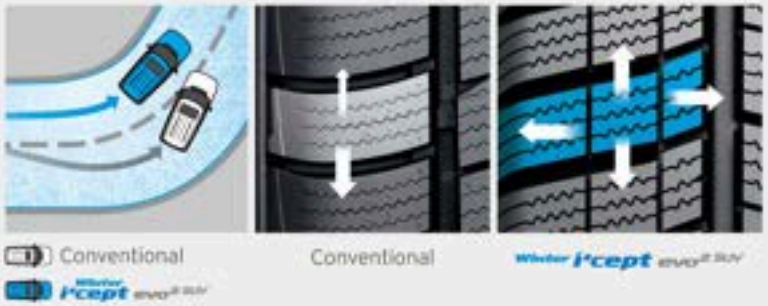
E Wide shoulder

Provides the best handling performance and improves grip by widened shoulder blocks compared to conventional tires.



F Optimised cube block

By dividing the lateral block through semi grooves there is increased flexibility and an optimised contact area when cornering.
Wet and snow handling performance is also improved.

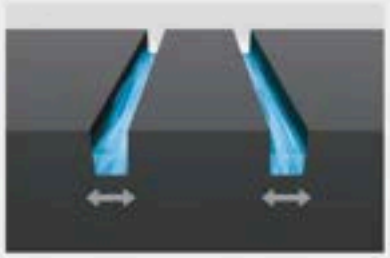


Wet performance

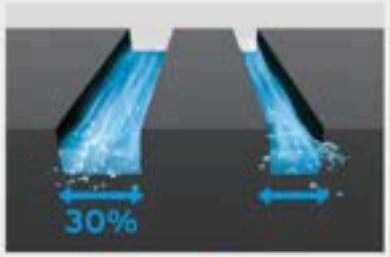
Applying two wide grooves in a straight direction ensures a stable driving performance on snowy and wet roads.
The wider groove helps to prevent hydroplaning and vibration during the drive.

G Wide aqua grooves

Improves wet performance through the use of 30% wider grooves compared to existing product.



Conventional



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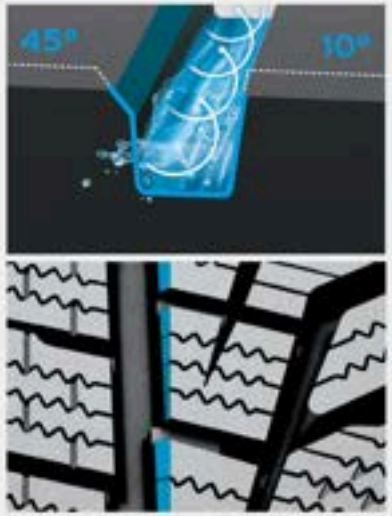
H Aqua slant

Provides ultimate performance in wet conditions by increasing cross sectional area.



Tire structure

High grip silica compound

Improved snow / wet traction and lowered rolling resistance.

Jointless full cover reinforced belt

Ideal tread strength.

Wide steel belt layer

Ensures optimal tread stiffness
and improves handling performance.

Equilibrium polyester carcass line

Enhanced sidewall stiffness and durability.

Adoption of high-hardness bead filler

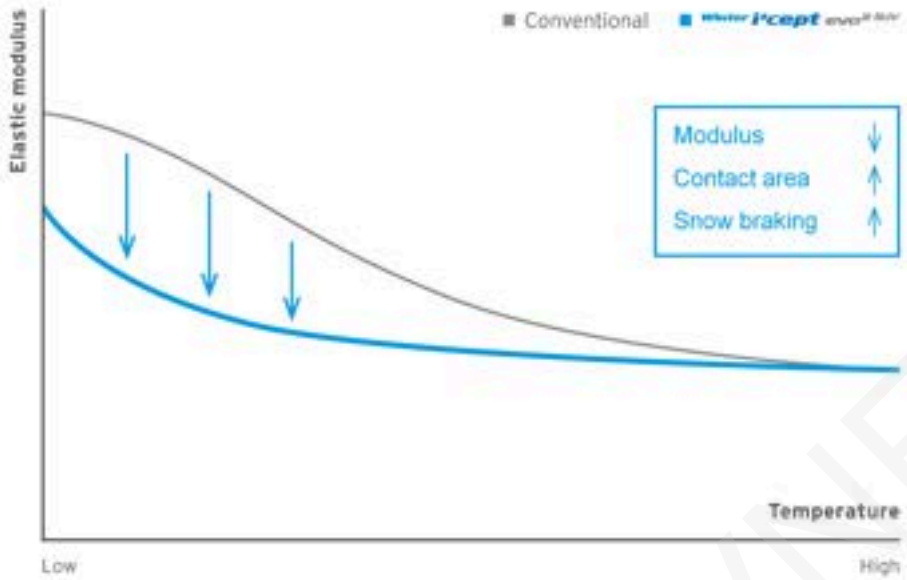
Improves handling and steering response.

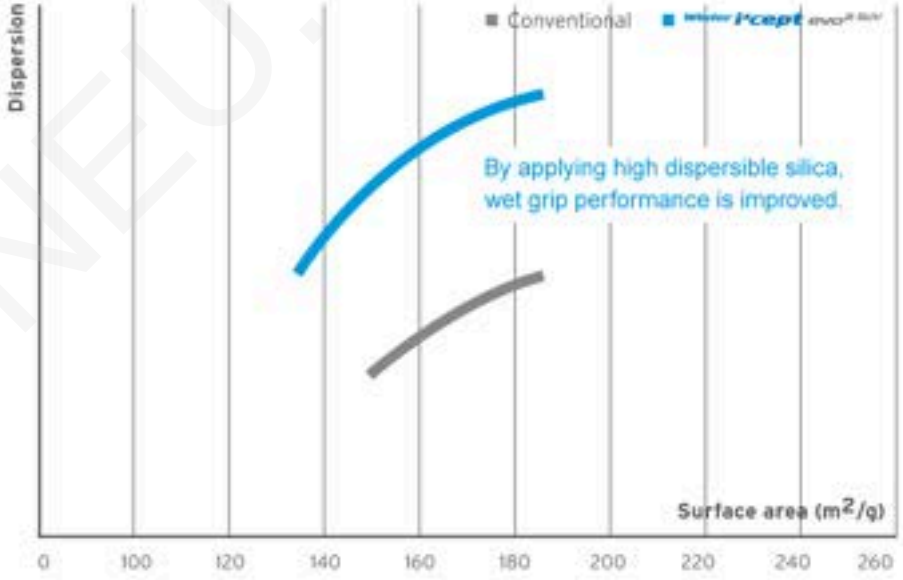
Ultra high strength bead wire

Improves uniformity and durability
of the bead position.

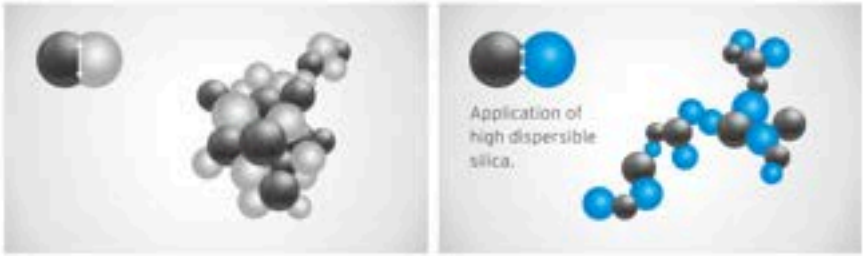
Compound

The application of nano-sized high dispersible silica improves wet and snow performance.





- The application of low Tg *S-SBR improves snow braking performance according to the compound modulus shift at a low temperature.
- A new rubber provides better grip by increasing the contact area through low stifness in cold weather.



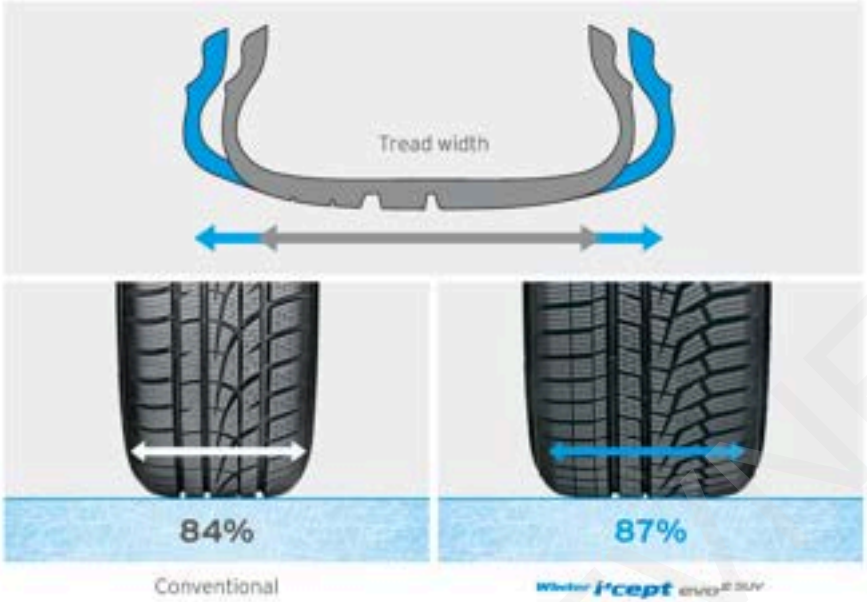
Conventional

HD silica

* S-SBR : Solution-Styrene Butadiene Rubber.

Profile

Technical factors



- Expanded tread width (Conventional 84% → New 87%)
- Increases contact area between the shoulder and road.

Results

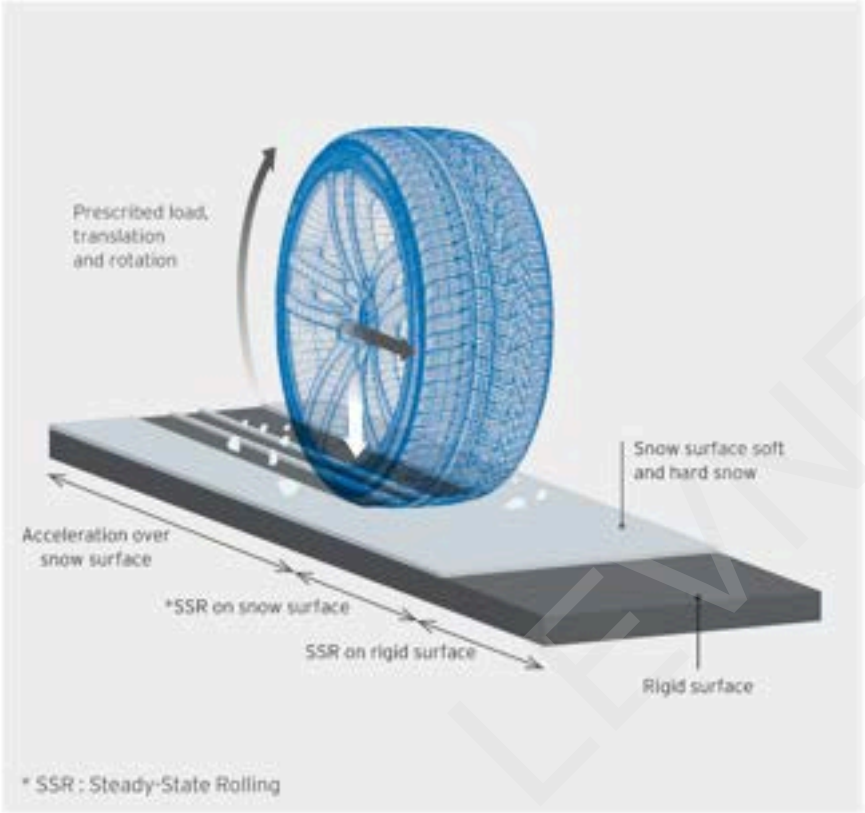
	Items	Conventional	Winter i*cept evo2 SUV
Traction	Footshape		
	Total contact area	100%	111%
Braking	Footshape		
	Total contact area	100%	109%

- Improves snow handling performance by increasing the contact area through profile optimisation.
- Improves snow and wet performance whilst preventing hydroplaning on wet roads by adopting equal footprint pressure.

Snow traction performance

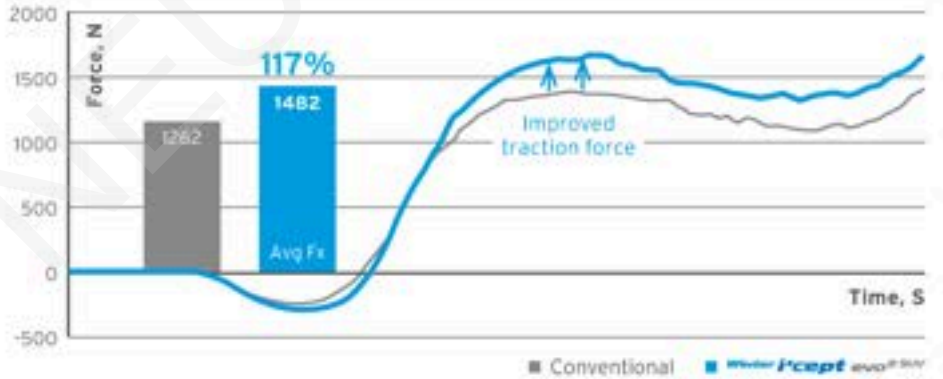
Use of snow traction simulation tool to design an optimised pattern for enhanced snow performance.

Snow traction simulation

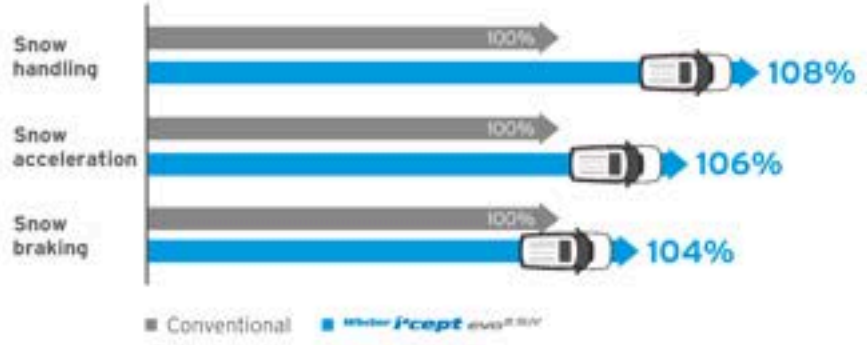


* SSR : Steady-State Rolling

Snow traction results



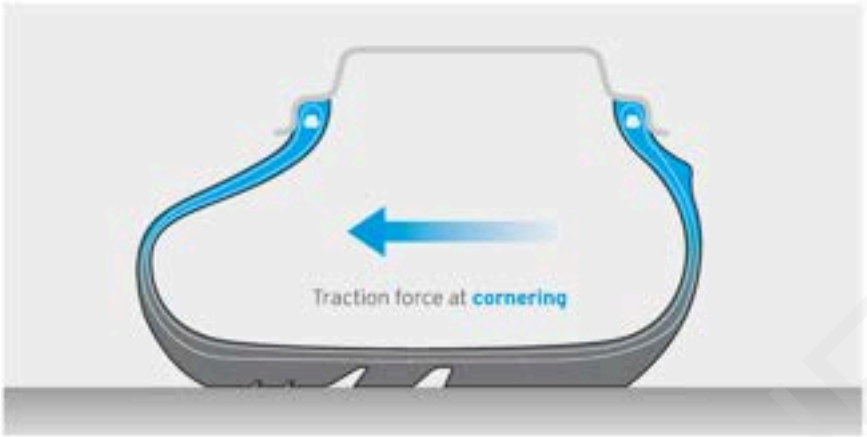
The actual results



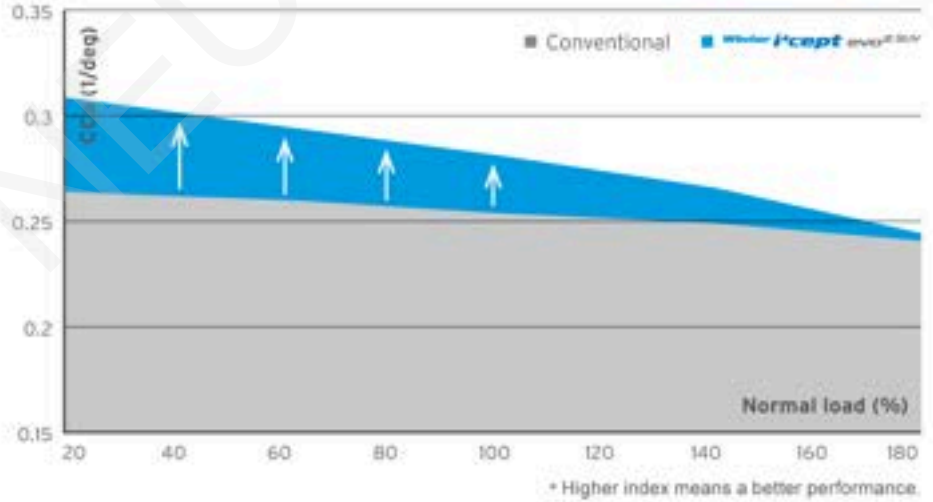
Dry handling performance

Reinforced sidewall and bead section leads to a direct steering response whilst improving the cornering force according to the weight shift.
Secures improved cornering grip and outstanding handling performance.

Improved dry handling due to reinforced sidewall



Cornering stiffness coefficient



* Higher index means a better performance.

Dry handling

Technical factor

- Reinforced sidewall and bead section.

Results

- Direct steering response.
- Improved cornering stiffness.
- Improved accuracy of steering and dry handling performance.