Inside look: Winter tyres

Across Europe, winter conditions are being addressed with increasing attention locally. With plunging temperatures, heavy snowfall and icy roads, there is an increasing demand for drivers to switch to winter tyres. The Tyre Industry is strongly recommending, according to local regulations, the use of winter tyres to help drivers cope with hazardous winter driving conditions.

There are significant and complex differences between winter and summer tyres which allow a vehicle to drive with an increased ease and safety on icy and wet roads. Winter tyres represent a product segment featuring specific tyre technologies aimed at optimal driving behaviour in snow, ice and generally lower temperatures.

A combination of special compounds and tread patterns specifically designed for challenging winter conditions significantly improves a tyre's grip and traction. The statistics are strong in support of fitting winter tyres in appropriate climate conditions.

In 2009, Belgian national committee, PneuBand, carried out a series of tests proving that a vehicle fitted with winter tyres travelling at 90km/h in wet conditions when the temperature is 2°C, will come to a standstill 11 metres earlier than a vehicle with summer tyres. In snowy conditions, a vehicle with winter tyres travelling at 50km/h breaking speed will stop 31 metres earlier compared to 62 metres for a vehicle with summer tyres2.

EU legislation requires that winter tyres for use in severe snow conditions exhibit a minimum level of performance on snow for both braking and traction. If a tyre passes the respective test, it can be marked with the three-peak mountain snowflake symbol.

Drivers in Nordic countries and Russia should make sure to equip their vehicles with Ice Grip or Nordic tyres to withstand the extreme snow and icy roads. These can either be studded or non-studded tyres, which are also referred to as soft compound winter tyres.

Data taken from a recent industry campaign shows that the use of winter tyres on passenger cars can reduce the number of accidents caused by lack of grip in winter conditions by 46%. To maximise performance and safety, each wheel should be fitted with a winter tyre.

When only one axle set of winter tyres is replaced, it is recommended to install the winter tyres on the rear to maintain control and grip.

Drivers are advised to fit winter tyres in advance of the arrival of winter in order to be fully equipped for the change in driving conditions.

The European tyre industry states that by using the correct tyres for each season, drivers can increase the lifetime of their summer and winter tyres and enjoy a greater level of safety and performance.

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2 PneuBand, Federauto, test conditions: Continental, VW Golf, 205/55R16, breaking speed 50>0 km/h, -5℃, 2009.