

Subject: Winter tyres on cars and vans

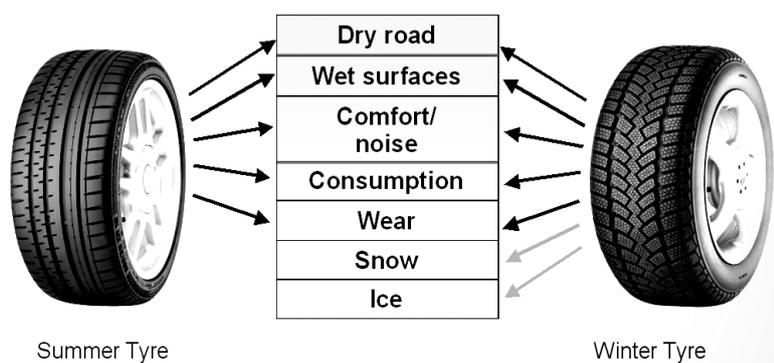
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Ask any British driver about winter tyres and their answer is likely to relate to snow covered roads and to old-style “M+S” tyres with chunky tread patterns often fitted only to the drive axle. The perception that winter tyres only give benefits on heavy snow is years out of date. Today’s winter tyre also provides greatly improved performance on cold and damp road surfaces.

As temperatures fall towards zero the tread rubber on summer tyres progressively hardens. This means the tyre is less able to adapt to the contour of the road surface, reducing grip. The rubber compounds used in modern winter tyres are specially formulated to remain flexible at lower temperatures. In addition, highly developed multi-sipe tread patterns give greatly improved grip on slush, snow and ice.

However, it is unrealistic to expect one type of tyre to provide maximum performance across a temperature range from below -10°C to more than 30°C as is increasingly experienced in the UK. This is why specialist tyres have been developed over many years. To enable them to deliver their full potential there is one crucial aspect – they must have balanced characteristics.



Winter driving

Most drivers adapt their driving style to the conditions when snow is on the ground or temperatures drop below zero. However, cold damp conditions are visibly no different from damp conditions in the warmer months. As a result drivers tend not to adjust their driving style despite the reduced grip available from their tyres. Research shows these potentially hazardous conditions are most likely to be encountered when the ambient temperature drops below 7°C. Long-term data from the Met office show that 99% of the UK land mass has an average winter temperature of 6°C or below. This heightened risk is confirmed by the increase in vehicle insurance claims that coincides with the onset of the cold season even when there is no snow on the ground.

In many European countries the benefits of winter tyres are so clearly recognised that their use is required by law. In the UK winter tyres are increasingly the choice of professionals who recognise the value of reliable mobility including the emergency services, utility companies and supermarket home deliveries.

Braking on wet roads

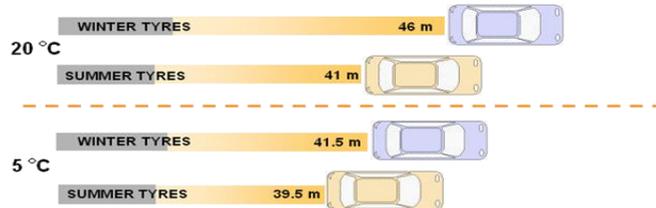
On damp or wet roads, tyres grip differently and braking distances are substantially longer. Under these conditions matching the tyre with the temperature is even more important.

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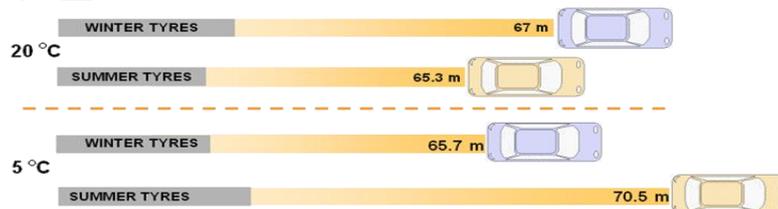
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Comparison of Temperature Dependent braking distance

Braking on dry roads from 62 mph (100 km/h) to rest



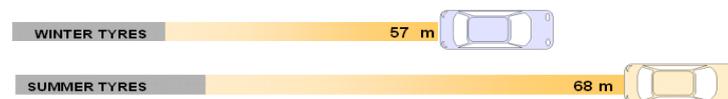
Braking on wet roads from 62 mph (100 km/h) to rest



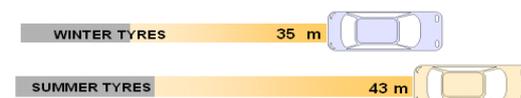
Braking on snow or ice covered roads

On snow- or ice-covered roads winter tyres reduce the braking distance by those vital metres. The comparison below proves the point.

Braking on icy roads from 20 mph (30 km/h) to rest



Braking on snowy roads from 30 mph (50 km/h) to rest



Fitting winter tyres

Winter tyres offer greatly improved grip in adverse winter conditions. If under these conditions winter and summer tyres are mixed on the same vehicle the difference in grip may seriously affect the handling and stability of the vehicle. **For this reason it is strongly recommended to fit winter tyres as a full set to all wheel positions.** When not in use, seasonal tyres should be stored under cover and protected from direct sunlight, chemicals, solvents and accidental damage.

Tyre Speed Symbols

It is not uncommon for the "Speed Symbol" of a winter tyre to be one or, rarely, two symbols lower than its equivalent summer tyre. This is because of the different tread rubber used in winter tyres which tends to run warmer than summer tyres, this feature helps aid grip in cold temperatures.

However, in order to maintain the vehicle's handling characteristics it is strongly recommended when selecting a winter tyre match the speed symbol of the summer tyre as closely as possible. If the maximum speed of the tyre as indicated by its speed symbol is lower than the maximum speed of the vehicle, a visual reminder of the tyre's maximum speed capability should be placed on the dashboard.

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