Rain, slush, snow, ice and cold temperatures are all part of winter driving. Stopping your passenger vehicle in these conditions can be challenging, as your tires have less traction on cold and often slippery road surfaces.

For example, if you're driving on a set of all-season tires on a rain-covered road at 80 km/h, you'll need twice the distance to stop than you would when driving at 50 km/h. Not surprisingly, snow and ice covered roads create even longer stopping distances:

### Passenger Vehicle with All-Season Tires: Approximate Stopping Distances in Metres

<table>
<thead>
<tr>
<th></th>
<th>Dry Road</th>
<th>Wet Road</th>
<th>Snowy Road</th>
<th>Icy Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 km/hr</td>
<td>35M +</td>
<td>40M +</td>
<td>55M +</td>
<td>67M +</td>
</tr>
<tr>
<td>80 km/hr</td>
<td>65M +</td>
<td>80M +</td>
<td>115M +</td>
<td>200M +</td>
</tr>
</tbody>
</table>

(Note: this table assumes consistent reaction times).

Source: ICBC Unsafe Speed Fact Sheet www.icbc.com, Forensic Dynamics.

All-season and summer tires are less effective in colder temperatures

All-season and summer tires are manufactured with a hard rubber compound designed to increase the tread life of the tire. Unfortunately, as the temperatures drop below 7° C, this compound becomes less flexible and these tires lose their ability to provide traction, even on dry roads.

### How winter tires help

Winter tires with a 3-peaked mountain and snowflake symbol provide better traction and stopping performance than all-season tires in cold temperatures and on wet, snowy and icy roads. Driving at just 20 km/h on an icy road, a set of four matched winter tires helps you stop 33 per cent sooner than when driving in the same conditions on a set of all-season tires.

The soft rubber compound used in winter tires allows them to remain pliable and adhere to the road more effectively as the temperature dips below 7° C. In addition, the tread design of winter tires helps them to displace rain, snow and slush between the tire and the road surface, further improving traction.

### Mud and snow tires: acceptable, but less effective

**M+S**

Tires with the M+S (Mud and Snow) symbol meet the minimum legal requirement for a winter tire in British Columbia. However, in severe winter conditions, they are less effective than the 3-peaked mountain and snowflake tires.

### Benefits and legal requirements

The improved traction offered by winter tires may be the difference between safely maneuvering or stopping on winter roads and being involved in a potentially serious motor-vehicle incident.

Most B.C. highways require passenger vehicles to have winter tires with either the 3-peaked mountain and snowflake symbol or the M+S symbol during the BC winter driving season (October 1st — March 31st). All vehicle tires must be in good condition and properly maintained. Winter tires and M+S tires must have at minimum tread depth of 3.5 mm (5/32”).

For more information on winter driving safety visit [ShiftIntoWinter.ca](http://ShiftIntoWinter.ca)

For information on highway conditions, visit [DriveBC.ca](http://DriveBC.ca)

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