



TIRE STUDS SAFETY STUDIES

► WHY ARE STUDED TIRES SAFER?

- Tire studs reduce the braking distance on ice.
- Tire studs improve handling on icy surfaces:
=> Friction improvement
- Tire studs roughen the ice and thus offer a better grip for the rubber and tire profile, especially for a non studded tire.
- Tire studs extend critical handling limits:
=> Sideways sliding can mean loss of control
=> Lateral forces are very important
- Tire studs reduce the risk of the car turning.

Results of Swedish studies

- The risk of accidents with studded tires is lower compared to non-studded tires
=> On roads outside of cities by 25%
=> In built-up areas by 20%

Sources:

Publication VTI Meddelande 756, Project code: 30121, published 1995
Socio-economic calculations by Arne Carlsson, Per Centrell and Gudrun Öberg
Swedish Road and Transport
Research Institute (VTI)
S-581 95 Linköping, Sweden

Results of Finnish studies

- Studded tires reduce fatal accidents during the entire winter period.
=> On ice by 48%
=> On snow by 20%

Sources:

Alppivuori Kari, Leppänen Anne, Anila Matti, Mäkelä Kari.
Road Traffic in Winter.
Summary of publications in the research programme.
Finnra Reports 57/1995.
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