

What is Snow and Ice Driving Techniques?

Worksheet

Snow and ice driving requires winter tires (min. 3 mm tread), 50% speed reduction, smooth steering, and increased stopping distance.

Questions

1. Winter tire minimum legal tread depth?
A) 1.6 mm
B) 2.5 mm
C) 3.0 mm
D) 5.0 mm
2. Why use winter tires below 7°C?
A) Thickness changes
B) Rubber softness
C) Tread count
D) Pressure increases
3. Stopping distance on snow vs. dry road is roughly...
A) Same
B) 2× longer
C) 3–4× longer
D) 10× longer
4. What is the safest way to accelerate on snow from standstill?
A) Full throttle
B) Gradually increase throttle
C) Use high gear
D) Short-spin wheels first
5. You need winter tires on snow. What is the minimum legal tread depth?
6. Accelerate smoothly on snowy road from standstill. What's the risk?
7. Compare stopping distance: dry vs. snow at 50 km/h.
8. Define: Winter tire requirements?
9. Define: Why are winter tires better in snow?
10. Define: What temperature requires winter tires?

Answer Key

1. C) 3.0 mm — Winter tires legally require 3 mm tread in many regions; summer tires need only 1.6 mm.
2. B) Rubber softness — Winter tire rubber remains soft below 7°C; summer rubber hardens and loses grip.
3. C) 3-4× longer — Snow grip is 60-70% less, so stopping distance is 3-4 times longer.
4. B) Gradually increase throttle — Gradual throttle prevents wheel-spin and maintains traction.
5. 1. Winter tire legal minimum in many countries: 3 mm tread depth 2. Standard summer tire minimum: 1.6 mm (insufficient for snow) 3. Best safety: replace when tread drops to 4-5 mm 4. Check tread with 20-cent coin test: if coin top edge disappears, tread is >3 mm
6. 1. Risk: spinning wheels if you apply power too quickly 2. Correct method: apply throttle very gradually 3. Feel for traction; release throttle if wheels slip 4. Use low gear (gear 2) to reduce wheel-spin tendency 5. Once moving, shift to normal gear and continue smoothly
7. 1. Dry road stopping distance: ~30 m 2. Snow stopping distance: ~80-100 m (3× longer!) 3. Ice stopping distance: ~150+ m (5× longer) 4. Always allow 10× normal stopping distance in severe snow/ice
8. Minimum 3 mm tread; 4-5 mm is safer; change when tread wears to 3-4 mm.
9. Soft rubber (below 7°C) and more siping grip ice/snow better than summer tires.
10. When regular temps drop below 7°C, even without snow, switch to winter tires.

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