



USAG Italy

Winter Driving Safety



*Viale Verona
(Strada Regionale 11)*



*Viale Verona
(Strada Regionale 11)*



Corso SS. Felice e Fortunato



Porta Santa Maria Pisa

14 October 2025



WINTER DRIVING





AGENDA



1. Regulations
2. Critical Weather Conditions
3. Vehicle Maintenance
4. Snow Tires
5. Snow Chains or Socks
6. Studded Tires
7. Emergency Equipment
8. Carbon Monoxide
9. Road Conditions and Army Color Codes
10. Conclusion
11. Contacts
12. Training Certificate





REGOLAMENTI - ARMY



*Army Europe Regulation, **AER 385-55**, 2020
Prevention of Motor-Vehicle Accidents*

“Winter driving training must be conducted **annually** during October and November.”

“Training personnel will annotate **OF 346** and **DA Form 348** to indicate the date the training was performed.”





REGOLAMENTI - ARMY



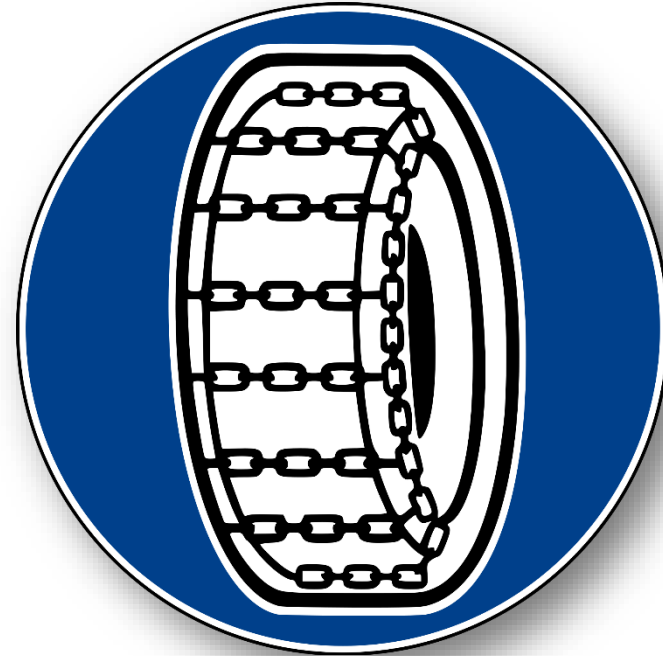
*Army in Europe and Africa, **AEA 385-10**,
Para 10-30, Safety Program
Management*

“All military and civilian personnel who drive transportation motor pool (TMP), General Services Administration (GSA), or military vehicles will receive an **annual winter-driving briefing**, which is conducted by their unit or organization during October of each year. The individual's Optional Form **(OF) 346** and **DA Form 348** will be annotated to indicate the date the training was completed”





REGULATIONS - ITALY



In Italy, from November 15 to April 15(*), on roads marked with a blue sign indicating “catene obbligatorie” (snow chains mandatory), it is mandatory to have snow tires or all-season tires mounted, or to carry anti-skid devices (snow chains or snow socks) in the vehicle. if the road is snow-covered and you have summer tires, you must stop and fit chains or snow socks.

(*) The period indicated is a national reference; local ordinance may anticipate or extend this requirement.



CRITICAL WEATHER CONDITIONS

FOG

- Reduced visibility, contours, colors, and lights are difficult to see; objects appear late.
- Altered perception as the “white wall” confuses depth and relative speeds.
- Increased braking distance due to wet asphalt and the resulting reduction in grip.
- Glare from reflection as high beams reflect off suspended micro-droplets.



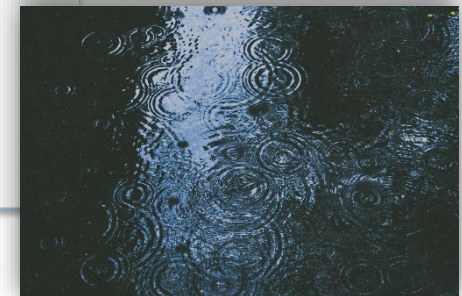
ICE/SNOW

- Increased braking distance due to ice and/or packed snow and the resulting reduction in traction.
- Black ice, which is difficult to detect.
- Possible carbon monoxide (CO) poisoning from vehicle exhaust.



HEAVY RAIN

- Reduced visibility due to rain on the vehicle windows and splashes caused by other vehicles.
- Aquaplaning due to the presence of a layer of water and puddles that can form on the asphalt.
- Engine and electrical system failures due to the presence of water and moisture.
- Speed limit reduced by 20 km/h compared to the imposed limit, 110 km/h on the highway.
- Increased braking distance due to the presence of water on the asphalt and the consequent reduction in grip.





CRITICAL WEATHER CONDITIONS

Safe Following Distance

$$D = \left(\frac{V}{10}\right)^2$$

D = safe following distance (in meters)
V = speed (in km/h)

The presence of one or more of the following factors significantly increases braking distance:

- Worn or tires with insufficient tread
- Poorly maintained braking system
- Excessive or unevenly distributed load
- Driver's physical or mental impairment
- Distracted drivers



Speed (km/h)	Distance covered in 1 second (in meters)	Braking distance (m)	Safe Distance (m)
50	14	16	25
60	17	24	33
90	25	53	60
100	28	66	71
130	36	111	108

In case of **rain**, braking distances can increase significantly depending on the intensity of the rain. In case of **heavy rain** or **snow**, the safe distance must be quadrupled compared to normal standards. In case of **ice**, the braking distance is 10 times greater.



CRITICAL WEATHER CONDITIONS

Safe Distance from Snow Removal Vehicles



Italian Traffic Code, Article 149, para 3: *“When snowplows and spreaders are in operation, vehicles must proceed with extreme caution. The safe distance from such machines must not be less than 20 meters. Vehicles traveling in the opposite direction must, if necessary, stop in order not to obstruct their work.”*





CRITICAL WEATHER CONDITIONS



Fog

Unlike rain or snow, fog “flattens” the visual scene: contrasts are reduced, lights scatter, and objects appear suddenly.

- There are different types of fog.
- Fog is also classified according to visibility:
- Fog is thicker than mist.
- It has a significant impact on visibility and transport in general.
- It is difficult to predict and forms mainly in the winter months (December/January).
- Fog can be localized (“fog banks”), taking drivers by surprise.
- It forms easily in rural areas where, compared to urban centers, temperatures drop more quickly at night, promoting the condensation of water vapor in the air.





FOG – Driving Tips



Before Leaving

- Clean the **windshield** and headlights inside and out to avoid glare and reflections.
- Check that the **wiper blades** are in good condition and that the washer fluid is suitable for winter use.
- Verify proper operation of **breaking system, lights** and **defogger/defroster systems**.
- Check the **tire** tread and pressure, including the spare tire.
- Check that any load does not obstruct front and rear visibility.

Maximum caution

- Always maintain a **safe speed** and increase **following distance** from the vehicle ahead.

Use the Correct Lights While Driving

- Use **low beams** and **fog lights** (never high beams). These widen the beam of light to the sides, improving visibility of the edges of the road.
- Keep fog lights on only when visibility is reduced; turn them off when conditions improve.
- Avoid turning on **rear fog** lights unless visibility is severely reduce, as they can dazzle drivers behind you.
- Parking lights alone are not sufficient, so combine them with low beams and fog lights when necessary.

Along the street

- Be aware of **pedestrians** and cyclists who may be harder to see.
- Approach intersections carefully, reducing speed and signaling early.
- Use the **right-hand edge** of the road as a guide and, if possible, avoid changing lanes.
- Watch out for animals and obstacles and drive carefully at dusk and at night.
- If it is clear, stay in the right-hand lane.
- Use rest areas if the fog becomes unmanageable and until the situation improves.
- In case of traffic jams or accidents, avoid sudden maneuvers.

Chain Collisions

- Do not get out of the vehicle unless absolutely safe to do so.
- Put on your reflective jacket, if necessary, and only if safety is guaranteed, place the warning triangle.
- Do not get out of the vehicle unless absolutely safe to do so.
- Call for help and take shelter in a protected area beyond the guardrail, if present.



CRITICAL WEATHER CONDITIONS



Heavy Rain

Intense rainfall can cause landslides and flooding along river networks, resulting in severe damage and loss of life for people and animals.

- ❑ The amount of rainfall is measured in millimeters of accumulation (pluviometry height), which corresponds to the amount of water fallen on a surface of one square meter.
- ❑ The millimeters of rain fallen in one hour defines the intensity of the rainfall:
 - Light Rain: 1 – 2 mm/h;
 - Mild Rain: 2 – 4 mm/h;
 - Moderate Rain: 4 – 6 mm/h;
 - Heavy Rain: > 6 mm/h;
 - Showers: > 10 mm/h;
 - Downpour: > 30 mm/h.

With greater rainfall intensity, the raindrops are larger in diameter and their impact speed on the ground is also higher.





HEAVY RAIN – Driving Tips



Maximum caution

- Reduce your **speed**: the speed limit is reduced by 20 km/h on compared to the posted limit, and to 110 km/h on highways.
- Increase the **safety distance** from the vehicle in front of you.
- Watch out for **water splashes** from other vehicles, as they can further reduce visibility.
- Turn on your **low-beam headlights**.
- Do not use fog lights.
- Avoid puddles near pedestrians, cyclists, and other vehicles.

Hydroplaning

- Be especially cautious on road sections where water collects.
- Lift your foot off the accelerator until you regain control of the vehicle.
- Check **tire pressure** regularly.

Malfunctions

- If the vehicle breaks down, keep the hood closed to prevent further damage.
- Do not try to restart the engine if it stopped after passing through deep water or a large puddle.



CRITICAL WEATHER CONDITIONS



Hydroplaning



Hydroplaning is the event in which tires lose contact with the road surface due to water buildup. This occurs when the road is very wet and the vehicle is traveling at high speed. The tire tread channels are unable to drain the water fast enough because of their configuration or wear, causing a layer of water to form between the tires and the road surface. The liquid layer lifts the tire, preventing it from maintaining proper contact with the ground. As a result, traction is lost, making steering and braking control impossible.

Loss of total grip due to wet pavement.

CAUSE

Tire tread design and depth

- Tread depth less than 3 mm

Vehicle speed

- As speed increases, the likelihood of tire contact decreases

Water thickness on the road

- The greater the thickness of the water, the higher the possibility of hydroplaning

Tire pressure

- Low pressure increases tire deformation, reducing water expulsion capacity
- High pressure reduces the contact surface between the tire and the asphalt

Effects

Increased braking distance

Decreased steering control

Increased accident risk

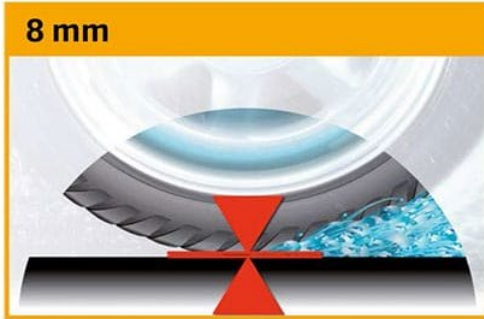
Increased likelihood of hydroplaning



CRITICAL WEATHER CONDITIONS



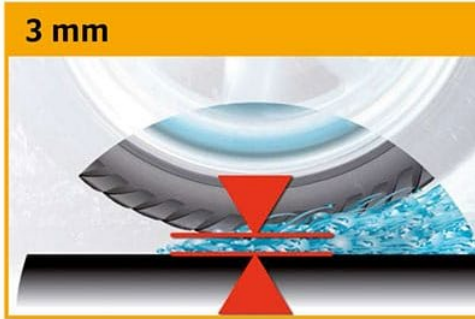
Hydroplaning



New tire tread

Suitable thickness

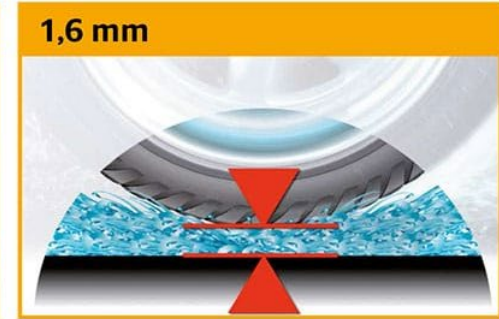
- › The tire maintains contact with the road



Tread thickness 3 mm

Recommended minimum thickness

- › Water accumulates between the tire and the road
- › Breaking distance increases



Tread thickness 1.6 mm (minimum permitted by law)

Insufficient thickness

- › Water completely prevents contact between the tire and the road
- › Breaking distance increases significantly





CRITICAL WEATHER CONDITIONS



Ice

Unlike snow, ice is more difficult to detect, especially at night.

- ❑ Reflects sunlight;
- ❑ Found in **shaded areas**, near woods and underbrush, and in generally humid areas;
- ❑ Often forms along bridges and overpasses;
- ❑ Usually forms in the early morning or at nightfall;
- ❑ The so-called “**black ice**” is very difficult to detect and is extremely slippery





ICE and SNOW – Driving Tips



Safe, slow, and gradual driving

- Avoid sudden movements of the steering wheel, braking, or acceleration to maintain traction
- Maintain moderate speed; slower driving improves grip and safety.

Increase your safety distance

- Use a greater safety distance than normal to have more time to react in case of sudden braking



Use the engine brake to slow down

- When driving downhill, use the engine brake (downshifting) to reduce speed.
- If the vehicle is equipped with ABS, let the system do its job.

Steer carefully on curves

- Take curves gradually without sudden steering wheel movements to maintain tire grip.

Control the vehicle in case of skidding

- When going uphill, maintain constant speed; when going downhill, slow down using the engine brake and brake gently to maintain control

Avoid sudden braking

- Brake progressively; avoid sudden braking that can cause the tires to lose grip

Avoid using cruise control

- Do not use cruise control on snowy or icy roads to maintain full control of the vehicle

Maintain visibility

- Make sure the windshield and lights are clean and defrosted
- Keep the interior of the vehicle warm to prevent fogging

Refueling

- Always keep enough fuel in case of unexpected delays or weather emergencies.
- On long trips, plan fuel stops in advance.



ICE and SNOW – Driving Tips



Stay Calm

Skidding or getting stuck?



1. Remove snow around the tires using a shovel or by hand.
2. Ask someone to push the vehicle forward or backward while you gently accelerate.
3. Turn the steering wheel slightly back and forth to help gain traction.
4. Place mats or sand under the drive wheels to improve grip.
5. Sprinkle a little salt or cat litter near the tires.
6. Temporarily deflate the tires slightly (only a bit – remember to reinflate them later).

Skidding with loss of control?



Rear-wheel drive:

- To avoid locking the wheels and losing control, ease off the accelerator – don't brake.
- Steer gently in the same direction the rear of the vehicle is sliding.
- Avoid sudden steering or braking until the tires regain traction

Front-wheel drive:

- Ease off the accelerator and brake gently (if necessary) to reduce speed.



Skidding with an automatic transmission?



1. Shift to Neutral (N) to disconnect the engine from the wheels.
2. Wait until you regain good traction before shifting back to Drive (D).



ICE and SNOW - Braking



Braking Gently

Use the brake pedal gently, preferring engine braking to slow down. If the vehicle begins to skid, remain calm and steer in the direction of the skid. If necessary, release and then gently reapply the brake to maintain control.

If your vehicle is equipped with ABS (anti-lock braking system), you can brake normally even on snow and ice, because the ABS prevents the wheels from locking.



With ABS:

Press the brake firmly and steadily – do not pump the pedal. The ABS will make the pedal vibrate slightly while preventing the wheels from locking.



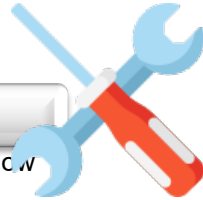
Without ABS:

If the vehicle begins to lose traction during braking, release the brake pedal slightly to regain control, then press the brake again gently.





VEHICLE MAINTENANCE / PMCS



Winter tires or anti-slip devices

- **From 15 November to 15 April**, vehicles must be equipped with winter or all-season tires, or anti-slip devices (chains or snow socks) stored inside the vehicle.

Antifreeze fluid

- Check that the coolant fluid is suitable for low winter temperatures.

Brakes

- Check the condition and wear of the brake system. Test the braking efficiency and ensure proper pedal pressure.

Climate control system

- Check the heater and defroster functions, especially for window defogging and de-icing.

Battery

- Keep the battery terminals clean and tight.
- Make sure the battery is fully charged, and if the vehicle will be parked for long periods, disconnect it or start the engine regularly.

Windshield wipers

- Check the condition of the wiper blades, replace them if worn, and refill the washer fluid with antifreeze solution.
- At night, if temperatures drop significantly and the vehicle is parked outdoors, lift the windshield wipers off the windshield to prevent them from sticking to the glass.

Bodywork

- Keep the vehicle exterior clean, especially the headlights and mirrors, to maintain visibility.
- Remove any ice, snow, or mud buildup.

Belts and hoses

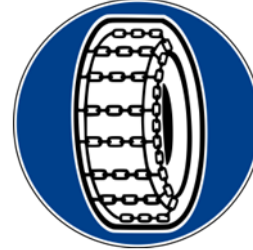
- Inspect the belts and rubber hoses for cracks, wear, or stiffness.
- Replace them if necessary.

Lights

- Check that all lights are functioning properly and that lens covers are clean to ensure maximum visibility.



SNOW CHAINS OR SNOW SOCKS



Follow the manufacturer instructions

Approved Snow Chains

In accordance with current technical standards (*)



Check that your vehicle is **compatible** with the device by consulting the manufacturer's instructions and contacting your trusted tire dealer.

Install the devices on the **vehicle's drive wheels**. In the case of a 4x4 vehicle, they must be mounted on all four wheels.

(*) UNI 11313, referring to the Ministry of Transport Decree of 10 May 2011, or equivalent Austrian certification (ÖNORM V5117/V5119).

Follow the manufacturer instructions

Approved Snow Socks

in accordance with current technical standards(*)



Textile devices **equivalent** to snow chains according to the Ministry of Infrastructure and Transport Decree of 23 May 2023;

Maximum speed: **50 km/h**

May be subject to **local restrictions**; verify local requirements and certifications for these devices.

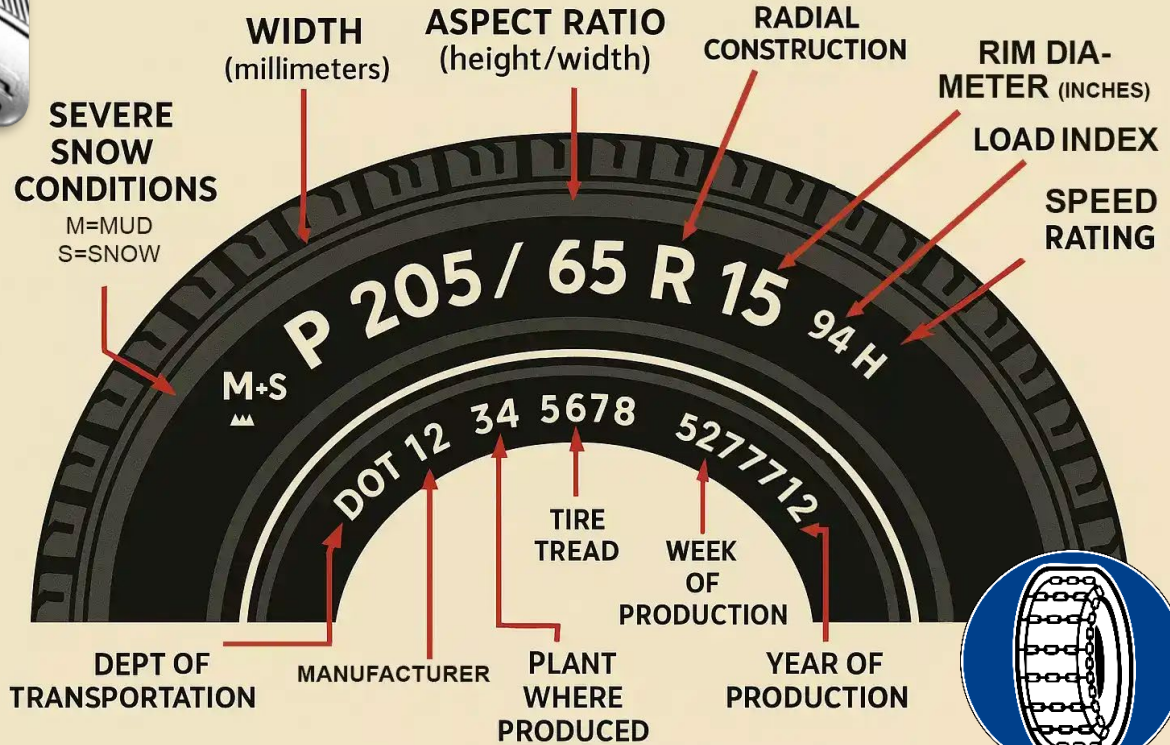
(*) UNI EN 16662-1:2020 or DIN 16662-1 in Germany.



SNOW TIRES



To be suitable for winter use, a tire must be marked with at least the letters **M+S** or their variants ('M-S', 'M+S' etc.). These two letters stand for “*mud*” and “*snow*”, indicating the tire is designated for mud and snow conditions.



The **alpine symbol**, on the other hand, is a pictogram showing a snowflake inside a mountain with three peaks. Unlike the M+S marking, this symbol is recognized only for tires that meet specific performance requirements in snow tests, as defined by the UNECE Regulation No. 117 (European standard). It identifies the performance parameters used for testing. This pictogram is often accompanied by the acronym “**3PMSF**” (*3 Peak Mountain Snow Flake*).



STUDDED TIRES



- Only approved types are allowed;
- The studs must not protrude more than 1.5mm from tire surface;
- Must be installed on all four wheels of the vehicle and on the trailer (if equipped);
- Number of studs: 80-160 per tire^(*);
- Maximum speed: 90 km/h (if regular road) or 120 km/h (highway);
- Must have rear mud flaps;
- Use limited to the period from 15 November to 15 March.



^(*) Ministerial Circular of 22 October 1971, No. 58/71.



EMERGENCY EQUIPMENT



What should you have in your car?

Adapt your emergency kit to the type of trip: on a mountain route, take more equipment (shovel, blanket, extra cover, spare fuel can), while for a short trip in the city, a basic set is sufficient (flashlight, jumper cables, first aid kit).

- Reflective vest
- Warning triangle
- Flashlight with extra batteries
- First aid kit with pocketknife
- Jumper cables
- Small shovel
- Blanket or sleeping bag
- Set of tire chains or traction mats
- Small bag of sand or cat litter for traction under the wheels.
- Matches/Lighter
- Extra set of gloves, socks, and a wool hat
- Anti-slip or warm clothing
- Small tools (pliers, adjustable wrench, screwdriver)
- Canned fruit or nuts
- Bottled water
- Necessary medications



- Required safety devices
- Recommended safety devices



CARBON MONOXIDE



Carbon monoxide is **odorless** and **colorless**, very dangerous, and can cause death quickly. When snow covers your vehicle or immobilizes it, and you need to keep the engine running to stay warm, always make sure **the exhaust pipe is clear of snow**. It is recommended to use the engine intermittently – only as long as necessary to stay warm.



Carbon monoxide can quickly fill a small enclosed space (like a car cabin) and cause loss of consciousness or death in a short time. *In 2016, in Passaic, New Jersey, 23-years-old Zanne Sahay, and two small children died inside a car that was covered in snow while the engine was running, as the exhaust pipe was blocked. The carbon monoxide built up rapidly inside the car, causing poisoning.*

<https://www.dailymail.co.uk/news/article-3414674/Tragedy-mother-one-year-old-son-die-carbon-monoxide-poisoning-New-Jersey-snow-blocked-car-tailpipe.html>

A vehicle buried by snow can become saturated with carbon monoxide in just **1 minute and 24 seconds**, reaching dangerous concentrations.





Carbone Monoxide (CO) Poisoning



CARBON MONOXIDE POISONING WHAT ARE THE SYMPTOMS?



HEADACHES



NAUSEA



DIZZINESS



BREATHLESSNESS

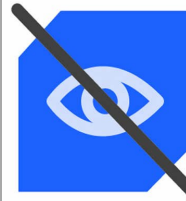


COLLAPSE



LOSS OF CONSCIOUSNESS

CARBON MONOXIDE (CO) POISONING



**CAN'T BE
SEEN**



**CAN'T BE
SMELLED**



**CAN'T BE
HEARD**



**CAN BE
STOPPED**





ROAD CONDITIONS - ARMY Color Codes



NOTE: The criteria for evaluating road conditions may vary slightly depending on the installation and reference area. Check with your installation's designated office for the current road condition color codes.

Road Condition	Road Surface	Snow	Ice	Snow Depth	Visibility	Temperature
GREEN	Dry	None or wind-blown snow	None	0 cm	> 50 m	> 2 °C
AMBER	Wet	Slushy or compact snow	Patches of ice or slush	< 5 cm	20 – 50 m	Between -1 and 2 °C
RED	Flooded	Accumulated Snow	Ice sheets	5-10 cm	15 – 20 m	Between -12°C and -1°C
BLACK	Heavy Flooded	Heavy accumulation	Extremely icy	> 10 cm	< 15 m	< -12 °C



ROAD CONDITIONS – Army Color Code



GREEN

Unrestricted vehicle dispatches are authorized. Ideal road, temperature, and visibility conditions exist. Drivers will observe normal precautions and speed limits.

AMBER

Ideal road, temperature, and visibility conditions do not exist (table H-1). If a road condition marked with an asterisk in the Amber category is reported, commanders (para 3-9) will declare Amber road conditions. Increased driving times, hazardous road conditions, and driver experience must be considered in dispatching vehicles under Amber conditions. Under Amber conditions, unit commanders (captains and above) may authorize dispatches for their vehicles and garrison directors of public works (DPWs) or primary staff (S1, S2, S3, and S4) may authorize their vehicle dispatches.

RED

Only mission-essential and emergency-essential vehicle dispatches are authorized. Road, temperature, and visibility conditions are equal to or worse than those noted in table. If one or more of the conditions marked with an asterisk in the Red category are reported, commanders will declare road conditions Red. The dispatch record for mission- and emergency-essential vehicles must be marked “mission- and emergency-essential.” Garrison commanders and battalion-level commanders may authorize dispatches of mission-essential vehicles. DPWs and chiefs of building and grounds and operation maintenance may approve mission-essential dispatches during Red road conditions to provide emergency support and for snow and ice removal. A risk assessment must be completed before dispatch.

NOTE: Drivers of military vehicles passing through areas that have declared Red road conditions should contact their chain of command and evaluate the risk of continuing the mission. Weather and road conditions must be part of all mission risk management decisions

BLACK

Only emergency-essential vehicle dispatches are authorized. Road, temperature, and visibility conditions are equal to or worse than those noted in table. If one or more of the conditions marked with an asterisk in the Black category are reported, commanders must declare road conditions Black. The dispatch record for emergency-essential vehicles (for example, ambulances, emergency engineer, fire, police) must be marked “emergency-essential.” Chiefs of appropriate offices (for example, DPW, fire, medical activity, provost marshal) may authorize dispatches of emergency vehicles. Garrison and brigade-level commanders and above may authorize dispatches of their emergency vehicles. A risk assessment must be completed before dispatch.

NOTE: Drivers of military vehicles passing through garrisons that have declared Black road conditions should contact their chain of command and evaluate the risk of continuing the mission. Weather and road conditions must be part of all mission risk-management decisions.



CONCLUSION



In critical weather conditions:

- ✓ If possible, **do not drive** and stay in a safe place.
- ✓ Flood waves from rivers and storm surges can **arrive suddenly** and be **deadly**.
- ✓ Always keep **emergency numbers** handy.



*Vicenza,
Novembre 2010*



*Vicenza,
Dicembre 2020*



*Marina di Pisa,
Dicembre 2023*





CONCLUSION



Drive **SAFELY** even in adverse weather conditions

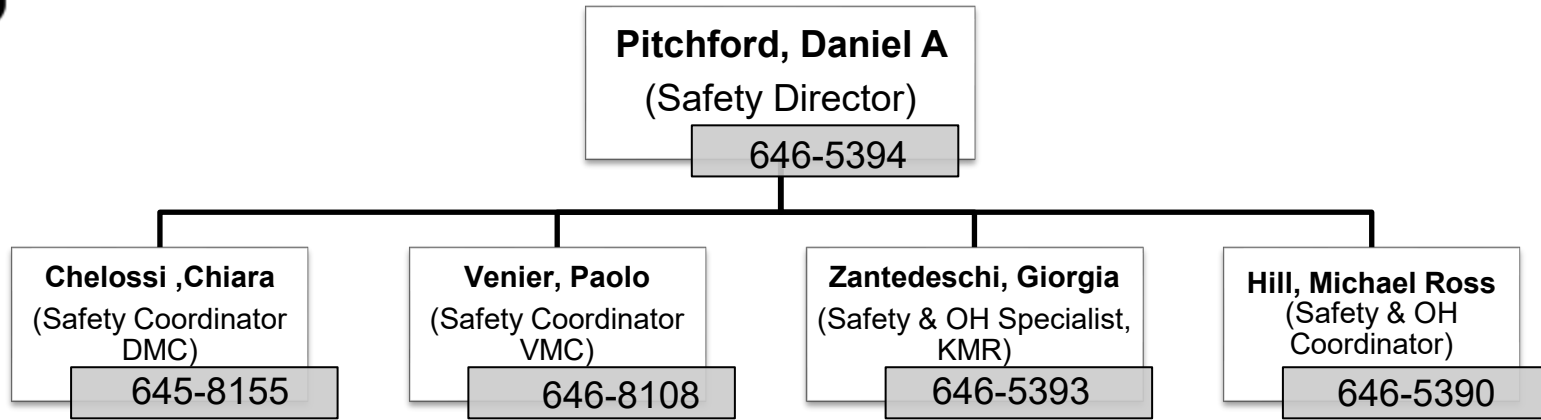
Don't let rain, fog, snow, or ice catch you off guard – with preparation and clear procedures, control is always in your hands.

- **Plan your route** in advance, considering alternative routes, and keep an eye on weather forecasts.
- **Check the condition of your vehicle:** tires, brakes, lights, and emergency kit should always be ready for use.
- **Apply emergency procedures** and keep emergency numbers handy.
- Drive attentively, maintaining **moderate speed, proper safe distances,** and as smooth and relaxed a driving style as possible.

With these steps, every adverse condition becomes manageable challenge.



USAG Italy Safety Office



VISIT US



[IMCOM-ID-E-USAG-Italy
Safety Office](#)



Vicenza, Bldg. 10, Rm. 33 & 34 (Camp Ederle)
Livorno, Bldg. 113 (Camp Darby)



[USAG Italy Camp Darby Community](#)

[USAG Italy Vicenza Community](#)





WINTER DRIVING **STAMP**



Diver Testing Section (DTS) Office

Vicenza

[Schedule appointment](#)

Bldg. 309

(Caserma Ederle)

Darby

[Schedule appointment](#)

Bldg. 703

(Camp Darby)



CERTIFICATE OF TRAINING

This is to certify that

.....
(Participant's Name)

Has successfully completed

USAG Italy FY26 WINTER DRIVER'S TRAINING (AER 385-55)

.....
(DD/MMM/YYYY)

.....
(Name of Supervisor or Master Driver)

.....
(Signature of Supervisor or Master Driver)

To obtain the stamp, submit this filled certificate to the Driver's Testing Office along with forms OF 346 and DA Form 348.