

**Training Record**

LOCATION NAME	PHYSICAL ADDRESS	NEAREST CITY	STATE	ZIP

**PRINTED NAME** (include company name if subcontractor)

**NOMBRE EN LETRA IMPRENTA** (si es subcontratista, incluya el nombre de la compañía)

*Signature / Firma*

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use p.2 for additional participants

**Check the following to indicate completion and identify any other activities or resources used or referenced.**

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Communicated the contents of this program and any applicable regulations, and where and how to access both.

Discussed temperature and the cold stress equation for the upcoming days.

Reviewed emergency action procedures for cold-related incidents.

SUPERVISOR/FACILITATOR'S NAME

*Signature*

DATE



## Protecting Workers from Cold Stress

Cold temperatures and increased wind speed (wind chill) cause heat to leave the body more quickly, putting workers at risk of cold stress. Anyone working in the cold may be at risk, e.g., workers in freezers, outdoor agriculture and construction.

### Common Types of Cold Stress

#### Hypothermia

- Normal body temperature (98.6°F) drops to 95°F or less.
- **Mild Symptoms:** alert but shivering.
- **Moderate to Severe Symptoms:** shivering stops; confusion; slurred speech; heart rate/breathing slow; loss of consciousness; death.

#### Frostbite

- Body tissues freeze, e.g., hands and feet. Can occur at temperatures above freezing, due to wind chill. May result in amputation.
- **Symptoms:** numbness, reddened skin develops gray/white patches, feels firm/hard, and may blister.

#### Trench Foot (also known as Immersion Foot)

- Non-freezing injury to the foot, caused by lengthy exposure to wet and cold environment. Can occur at air temperature as high as 60°F, if feet are constantly wet.
- **Symptoms:** redness, swelling, numbness, and blisters.

### Risk Factors

- Dressing improperly, wet clothing/skin, and exhaustion.

### For Prevention, Your Employer Should:

- Train you on cold stress hazards and prevention.
- Provide engineering controls, e.g., radiant heaters.
- Gradually introduce workers to the cold; monitor workers; schedule breaks in warm areas.

For more information:



OSHA 3159-0-2K 2014



## How to Protect Yourself and Others

- Know the symptoms; monitor yourself and co-workers.
- Drink warm, sweetened fluids (no alcohol).
- Dress properly:
  - Layers of loose-fitting, insulating clothes
  - Insulated jacket, gloves, and a hat (waterproof, if necessary)
  - Insulated and waterproof boots

## What to Do When a Worker Suffers from Cold Stress

### For Hypothermia:

- Call 911 immediately in an emergency.
- To prevent further heat loss:
  - Move the worker to a warm place.
  - Change to dry clothes.
  - Cover the body (including the head and neck) with blankets, and with something to block the cold (e.g., tarp, garbage bag). Do not cover the face.
- If medical help is more than 30 minutes away:
  - Give warm, sweetened drinks if alert (no alcohol).
  - Apply heat packs to the armpits, sides of chest, neck, and groin. Call 911 for additional rewarming instructions.

### For Frostbite:

- Follow the recommendations "For Hypothermia".
- Do not rub the frostbitten area.
- Avoid walking on frostbitten feet.
- Do not apply snow/water. Do not break blisters.
- Loosely cover and protect the area from contact.
- Do not try to rewarm the area unless directed by medical personnel.

### For Trench (Immersion) Foot:

- Remove wet shoes/socks; air dry (in warm area); keep affected feet elevated and avoid walking. Get medical attention.

For more information:



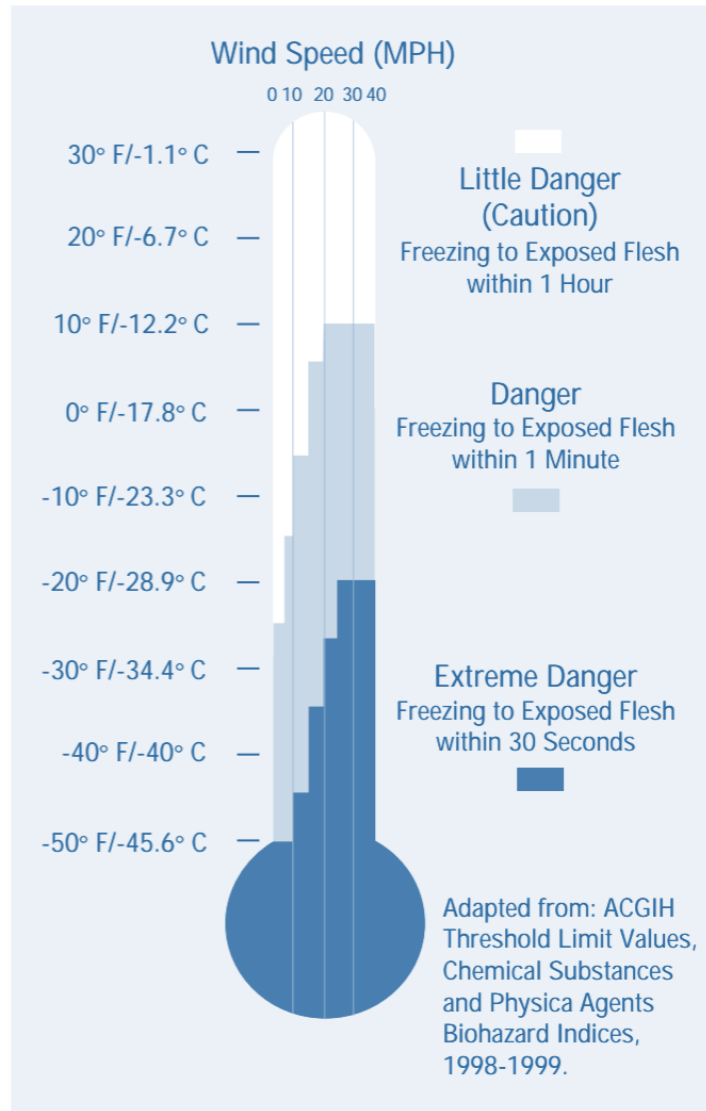
## THE COLD STRESS EQUATION



### LOW TEMPERATURE + WIND SPEED + WETNESS = INJURIES & ILLNESS

When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result.

**Hypothermia** can occur when *land temperatures* are **above** freezing or *water temperatures* are below 98.6°F/ 37°C. Cold-related illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds, or wet clothing.



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Occupational Safety and Health Administration

OSHA 3156  
1998

**WINTER DRIVING - PREPARATION**

Make up a winter driving kit:

- Bag of sand, salt, cat litter, ice melt, etc.
- Small snow shovel
- Snow brush
- Traction mats
- Flashlight and extra batteries
- Window-washing solvent
- Ice scraper
- Shop cloths/paper towels
- Booster cables
- Warning flares or triangles
- Gloves/mittens
- Head cover
- Heavy coat
- Blanket

Inspect your vehicle! Make sure all components and systems that could affect safety are in good working condition, including the window defrosters. Keep preventive maintenance current and keep your tires adequately inflated. Follow the manufacturer's specifications for tire size and inflation, and never mix radial tires with bias-ply or other types, which can cause poor handling, especially on slippery roads. Try to keep your gas tank at least half full.

Watch the weather reports, especially prior to a long trip or when driving in isolated areas. If you can, delay the trip until the weather improves but at least let someone know your route, destination and estimated time of arrival.

Always avoid driving while drowsy. Whether you need to take a nap or take a walk, get yourself awake and alert before you drive. Snow and ice will punish you severely for nodding off while driving.

Do not warm up your vehicle in a garage or other enclosed area. The carbon monoxide from the exhaust can kill you.

**DRIVING**

- Use your seat belt every time you get into your vehicle.
- Take extra care as you approach shaded areas, bridges, overpasses and intersections, even if there is no visible snow or ice. These areas are more likely to accumulate and retain slippery surfaces.
- Do not use cruise control when driving on any slippery surface (wet, ice, sand).
- Give yourself a good deal of extra time to travel and drive slowly. Everything takes longer on snow and ice, even the walk to the truck.
- The dry-pavement following distance should be at least doubled. This gives you more time and room to steer around a problem rather than having to brake for a problem, which makes losing control in a skid less likely.
- Accelerate and decelerate slowly.
- Don't stop if it is safe to proceed slowly. Try to slow down and time traffic lights so that you can continue moving through green, but watch out for cross traffic that is unable to stop.
- Don't power up hills, which will often just cause your wheels to spin. Get enough momentum on the flat approach to carry you to the top without braking. As you reach the crest, reduce your speed and proceed down hill as slowly as possible.
- If your wheels skid:
  - Continue to look at your intended path of travel
  - Lift your foot from the accelerator, but avoid slamming on the brakes
  - Steer in the direction you want the front of the vehicle to go
  - When the rear wheels stop skidding, control the steering to avoid a skid in the opposite direction

**IF STRANDED**

If you become snow-bound, it is generally best to stay with your vehicle. It provides some shelter and is easier to spot for rescuers than an individual. Leaving the vehicle, especially in low visibility increases the chances of getting lost. Tie a brightly colored piece of cloth to the antenna or close it in the top of a rolled-up window. Keep the flashlight on at night.

Only run the engine intermittently to remove the chill. It is important to conserve gasoline. Make sure the exhaust pipe is not clogged with snow, ice or mud, which could push the carbon monoxide into the engine compartment. Floor mats, newspapers, or other make shift coverings help insulate individuals from the cold without having to run the engine constantly.

**COMMERCIAL MOTOR VEHICLES**

49 CFR 392.14 states: *Extreme caution in the operation of a commercial motor vehicle shall be exercised when hazardous conditions, such as those caused by snow, ice, sleet, fog, mist, rain, dust, or smoke, adversely affect visibility or traction. Speed shall be reduced when such conditions exist. If conditions become sufficiently dangerous, the operation of the commercial motor vehicle shall be discontinued and shall not be resumed until the commercial motor vehicle can be safely operated. Whenever compliance with the foregoing provisions of this rule increases hazard to passengers, the commercial motor vehicle may be operated to the nearest point at which the safety of passengers is assured.*

**TRAINING PLAN**

- A.** *Communicate the contents of this program and any applicable regulations, and where and how to access both.*
- B.** *Discuss temperature and the cold stress equation for the upcoming days.*
- C.** *Review emergency action for cold-related incidents.*
- D.** *Complete the training report.*  
*Identify additional topic(s) and training resources (if any), check the training steps to verify completion, and include the date and location of the training and the supervisor/facilitator name and signature.*