



Procedure

Saskatoon & Area - Occupational Health & Safety

Number: 53-011

Title: Physical Hazard:

Thermal Conditions: Indoor/Outdoor Cold

Saskatchewan Employment Act:

OHS Regulation: 70

Date: January 1, 2017

Date Revised/Reaffirmed: May 28, 2018

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Purpose

The purpose of this procedure is to establish the processes to follow to ensure safe work practices to reduce the risk of accidents, hypothermia and frostbite during outdoor work in cold weather or cold conditions

Roles and Responsibilities

Manager/Supervisor must ensure:

- They identify the projects or tasks that require work in cold conditions
- Workers are informed of the risks and provided the appropriate controls
- Warm up break schedules are developed following guidelines set out in table: [Work Warm up Schedule for outdoor activities](#)
- Workers are monitored to ensure procedures are followed and equipment is worn and maintained

Worker must ensure:

- They use equipment provided and report equipment or procedural failure to their manager/supervisor
- They follow the warm up break schedules as outlined by their manager/supervisor
- They report to their supervisor and the Safety Alert System/Incident Report Line for any symptoms related to or near miss conditions as a result of cold weather or cold conditions

Materials

- Appropriate PPE if required

Non-Compliance/Breach:

Non-compliance with this policy will result in a review of the incident. A review for non-compliance may result in disciplinary action, up to and including termination of employment or privileges; fines and /or prosecution of individuals under the Saskatchewan Employment Act and OHS Regulations.

Review Dates:

January 1, 2017

May 28, 2018

Work Warm-up Schedule for Outdoor Activities

This information applies to any four-hour period. Warm-up breaks are assumed to provide 10 minutes in a warm environment. These guidelines apply to workers wearing dry clothing.

| Sunny sky Air temperature | | No noticeable Wind | | Wind 8 km/h (5 mph) | | Wind 16 km/h (10 mph) | | Wind 24 km/h (15 mph) | | Wind 32 km/h (20 mph) | |
|------------------------------|----------------------|-----------------------------------|----------------------------|-----------------------------------|----------------------------|--------------------------------------|----------------------------|-----------------------------------|----------------------------|--------------------------------------|----------------------------|
| °C Below Zero* | °F Below Zero* | Max. work period | Min. No. of breaks** | Max. work period | Min. No. of breaks** | Max. work period | Min. No. of breaks** | Max. work Period | Min. No. of breaks** | Max. work period | Min. No. of breaks** |
| 26 to 28 | 15 to 19 | 120 minutes | 1 | 120 minutes | 1 | 75 minutes | 2 | 55 minutes | 3 | 40 minutes | 4 |
| 29 to 31 | 20 to 24 | 120 minutes | 1 | 75 minutes | 2 | 55 minutes | 3 | 40 minutes | 4 | 30 minutes | 5 |
| 32 to 34 | 25 to 29 | 75 minutes | 2 | 55 minutes | 3 | 40 minutes | 4 | 30 minutes | 5 | Non-emergency work should Stop | |
| 35 to 37 | 30 to 34 | 55 minutes | 3 | 40 minutes | 4 | 30 minutes | 5 | Non-emergency work should stop | | | |
| 38 to 39 | 35 to 39 | 40 minutes | 4 | 30 minutes | 5 | Non-emergency work should stop | | | | | |
| 40 to 42 | 40 to 44 | 30 minutes | 5 | Non-emergency work should stop | | | | | | | |
| 43 and Below | 45 and below | Non-emergency work should stop | | | | | | | | | |

* all temperatures are approximate

** Number of breaks: This includes a normal break after 2 hours and the number of additional warm-up breaks needed

Table found at: <http://www.saskatchewan.ca/business/safety-in-the-workplace/hazards-and-prevention/safety-in-professions-and-industry/working-outdoors#working-in-cold-conditions>

Apply the schedule one step lower for work with limited physical activity. For example, at -35°C (-30°F) with no noticeable wind, a worker with a job requiring little physical movement should have a maximum work period of 40 minutes with four breaks in a four-hour period.

If reliable weather reports are not available, use the following as a guide to estimate wind velocity:

- An 8 km/h wind will move a light flag
- A 16 km/h wind will fully extend the flag
- A 24 km/h wind will raise a newspaper sheet
- A 32 km/h wind will produce blowing and drifting snow

If only the Wind Chill Factor (in watts per square meter) or Equivalent Temperature are available, a rough guide for applying them, rather than the temperature and wind velocity factors above, would be:

- Special warm-up breaks should be initiated at a wind chill of about 1750 (Equivalent Temperature of -32°C)
- All non-emergency work should stop at or before a wind chill of 2250 (equivalent temperature of -51°C) should be used to determine the point at which all non-emergency work should stop.