



SASKATCHEWAN WORK / REST GUIDELINES

EHS North America Business Program – Heat Safety

Appendix C

Wet Bulb Globe Temperature (WBGT) measurements are used as the primary means of determining rest break schedules when working in hot conditions indoors, outdoors, and underground. The following work/rest break schedule is based on WBGT measurements:

WBGT RECOMMENDED REST BREAK SCHEDULE

WBGT INDEX				
Work load	Work rate			
	Continuous work	15 minutes rest per hour	30 minutes rest per hour	45 minutes rest per hour
Very heavy	Not recommended	Not recommended	Up to 28.0°C	28.0°C up to 30.0°C
Heavy	Not recommended	Up to 27.5°C	27.5°C up to 29.0°C	29.0°C up to 30.5°C
Moderate	Up to 28.0°C	28.0°C up to 29.0°C	29.0°C up to 30.0°C	30.0°C up to 31.5°C
Light	Up to 30.0°C	30.0°C up to 31.0°C	31.0°C up to 32.0°C	32.0°C up to 32.5°C

- The WBGT index in the above tables is based on the American Conference of Governmental Industrial Hygienists (ACGIH) 2018 TLV Handbook. The Botsball Index was developed by using the WBGT cut-off values in the ACGIH 2018 Handbook and the values were calculated based on the WBGT-to-Botsball conversion equation developed by Sundin et al, (1973).
- These indices are not equivalent to regular thermometer readings. **The tables apply only to healthy, acclimatized workers who are wearing lightweight, light coloured, loose-fitting cotton clothing.** Adjustments must be made to these indices for unacclimatized workers and workers with special needs.
- Intended to be used as an initial screening tool to evaluate whether a heat stress situation may exist.
- Very Heavy means** – Very intense activity at fast to maximum pace.
- Heavy work means** – Intense arm and trunk work, carrying, shoveling, manual sawing, pushing and pulling heavy loads; and walking at a fast pace.
- Moderate work means** – Sustained moderate hand and arm work, moderate arm and leg work, moderate arm and trunk work, or light pushing and pulling. Normal walking.
- Light work means** – Sitting with light manual work with hands or hands and arms, and driving. Standing with some light arm work and occasional walking.
- Continuous work** - Assumes that there are short morning and afternoon breaks and a longer lunch break in an eight-hour day.
- Rest breaks** – Includes all breaks, such as regular work breaks and unscheduled pauses during work. If rest breaks occur in an area that is significantly cooler than the work position, the WBGT is modified. See next section.

Reference: WorkSafe Saskatchewan *Working Under Hot Conditions*



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When WBGT measurements are not available, the rest break guideline according to humidex can also be used. The following work/rest break schedule is based on humidex readings:

HUMIDEX REST BREAK GUIDELINE

		Table 4. Rest break guidelines using Humidex	
Humidex 1 Unacclimatized workers doing moderate work OR acclimatized workers doing heavy work		Response	Humidex 2 Unacclimatized workers doing light work OR acclimatized workers doing moderate work
Humidex values	25 – 29	<ul style="list-style-type: none"> Provide cool water as needed 	32 – 35
	30 – 33	<ul style="list-style-type: none"> Post heat stress alert notice Encourage workers to drink extra water Record the temperature and relative humidity (RH) hourly 	36 – 39
	34 – 37	<ul style="list-style-type: none"> Post heat stress warning notice Notify workers that they need to stay hydrated, so drink water more frequently Workers should be trained to recognize symptoms 	40 – 42
	38 – 39	<ul style="list-style-type: none"> Work with 15-minute break per hour Give at least one cup (240 mL) of cool (10-15°C) water every 20 minutes Workers with symptoms should seek medical attention 	43 – 44
	40 – 41	<ul style="list-style-type: none"> Work with 30-minute break per hour & take all of the aforementioned precautions 	*45 – 46*
	42 – 44	<ul style="list-style-type: none"> Work with 45-minute break per hour & take all of the aforementioned precautions 	*47 – 49*
	45 or above	<ul style="list-style-type: none"> *ONLY medically supervised work can continue at Humidex above 45* 	*50 or above*

Reference: WorkSafe Saskatchewan *Working Under Hot Conditions*