

Basic Thermal Risk Assessment – Apparent Temperature (informative only)

HAZARD TYPE	Assessment Point Value				
	0	1	2	3	
Sun Exposure	Indoors <input type="checkbox"/>	Full Shade <input type="checkbox"/>	Part Shade <input type="checkbox"/>	No Shade <input type="checkbox"/>	
Hot surfaces	Neutral <input type="checkbox"/>	Warm on Contact <input type="checkbox"/>	Hot on contact <input type="checkbox"/>	Burn on contact <input type="checkbox"/>	
Exposure period	< 30 min <input type="checkbox"/>	30 min – 1hour <input type="checkbox"/>	1 hour - 2 hours <input type="checkbox"/>	> 2 hours <input type="checkbox"/>	
Confined space	No <input type="checkbox"/>			Yes <input type="checkbox"/>	
Task complexity		Simple <input type="checkbox"/>	Moderate <input type="checkbox"/>	Complex <input type="checkbox"/>	
Climbing, up/down stairs or ladders	None <input type="checkbox"/>	One Level <input type="checkbox"/>	Two Levels <input type="checkbox"/>	>Two Levels <input type="checkbox"/>	
Distance from cool rest area	<10 Metres <input type="checkbox"/>	10 - 50 Metres <input type="checkbox"/>	50-100 Metres <input type="checkbox"/>	>100 Metres <input type="checkbox"/>	
Distance from drinking water	<10 Metres <input type="checkbox"/>	10 - 30 Metres <input type="checkbox"/>	30-50 Metres <input type="checkbox"/>	>50 Metres <input type="checkbox"/>	
Clothing (permeable)		Single layer (light) <input type="checkbox"/>	Single layer (mod) <input type="checkbox"/>	Multiple layer <input type="checkbox"/>	
Understanding of heat strain risk	Training given <input type="checkbox"/>			No training given <input type="checkbox"/>	
Air movement	Strong Wind <input type="checkbox"/>	Moderate Wind <input type="checkbox"/>	Light Wind <input type="checkbox"/>	No Wind <input type="checkbox"/>	
Resp. protection (-ve pressure)	None <input type="checkbox"/>	Disposable Half Face <input type="checkbox"/>	Rubber Half Face <input type="checkbox"/>	Full Face <input type="checkbox"/>	
Acclimatisation	Acclimatised <input type="checkbox"/>			Unacclimatised <input type="checkbox"/>	
SUB-TOTAL A					
		2	4	6	
Metabolic work rate*		Light <input type="checkbox"/>	Moderate <input type="checkbox"/>	Heavy <input type="checkbox"/>	
SUB-TOTAL B					
		1	2	3	4
Apparent Temperature		< 27°C <input type="checkbox"/>	>27°C ≤ 33°C <input type="checkbox"/>	>33°C ≤ 41°C <input type="checkbox"/>	> 41°C <input type="checkbox"/>
SUB-TOTAL C					
TOTAL = A plus B Multiplied by C =					

*Examples of Work Rate.

Light work: Sitting or standing to control machines; hand and arm work assembly or sorting of light materials.

Moderate work: Sustained hand and arm work such as hammering, handling of moderately heavy materials.

Heavy work: Pick and shovel work, continuous axe work, carrying loads up stairs.

Instructions for use of the Basic Thermal Risk Assessment

- Mark each box according to the appropriate conditions.
- When complete add up using the value at the top of the appropriate column for each mark.
- Add the sub totals of Table A & Table B and multiply with the sub-total of Table C for the final result.
- If the total is **less than 28** then the risk due to thermal conditions are low to moderate.
- If the total is **28 to 60** there is a potential of heat-induced illnesses occurring if the conditions are not addressed. Further analysis of heat stress risk is required.
- If the total **exceeds 60** then the onset of a heat-induced illness is very likely and action should be taken as soon as possible to implement controls.

It is important to note that that this assessment is to be used as a guide only. A number of factors are not included in this assessment such as employee health condition and the use of high levels of PPE (particularly impermeable suits). In these circumstances experienced personnel should carry out a more extensive assessment.

Apparent Temperature: Temperature - Humidity scale.

Align dry bulb temperature with corresponding relative humidity to determine apparent temperature in unshaded section of table. Numbers in () refer to skin humidities above 90% and are only approximate.

Dry Bulb Temperature. (°C)	Relative Humidity (%)										
	0	10	20	30	40	50	60	70	80	90	100
20	16	17	17	18	19	19	20	20	21	21	21
21	18	18	19	19	20	20	21	21	22	22	23
22	19	19	20	20	21	21	22	22	23	23	24
23	20	20	21	22	22	23	23	24	24	24	25
24	21	22	22	23	23	24	24	25	25	26	26
25	22	23	24	24	24	25	25	26	27	27	28
26	24	24	25	25	26	26	27	27	28	29	30
27	25	25	26	26	27	27	28	29	30	31	33
28	26	26	27	27	28	29	29	31	32	34	(36)
29	26	27	27	28	29	30	30	33	35	37	(40)
30	27	28	28	29	30	31	33	35	37	(40)	(45)
31	28	29	29	30	31	33	35	37	40	(45)	
32	29	29	30	31	33	35	37	40	44	(51)	
33	29	30	31	33	34	36	39	43	(49)		
34	30	31	32	34	36	38	42	(47)			
35	31	32	33	35	37	40	(45)	(51)			
36	32	33	35	37	39	43	(49)				
37	32	34	36	38	41	46					
38	33	35	37	40	44	(49)					
39	34	36	38	41	46						
40	35	37	40	43	49						
41	35	38	41	45							
42	36	39	42	47							
43	37	40	44	49							
44	38	41	45	52							
45	38	42	47								
46	39	43	49								
47	40	44	51								
48	41	45	53								
49	42	47									
50	42	48									

(Source: Steadman, 1979)