

How cold is it outside? Simply knowing the temperature doesn't tell you enough about the conditions to enable you to dress sensibly for all winter weather. Other factors including wind speed, relative humidity and sunshine play important roles in determining how cold you feel outside. The "wind chill index" was developed to describe the relative discomfort/danger resulting from the combination of wind and temperature.

The importance of the wind chill index is as an indicator of how to dress properly for winter weather. In dressing for cold weather an important factor to remember is that entrapped insulating air warmed by body heat is the best protection against the cold. Consequently, wear loose-fitting, lightweight, warm clothing in several layers. Outer garments should be tightly-woven, and water-repellant. Gloves should be worn to protect the hands and fingers from freezing.

Winter liners worn under your hard hat (Figure 1) are a great way to retain body heat. About 40% of one's body heat can be lost through the head. About 16% of the body's blood volume is in the head at any given time, but it is a very exposed structure, allowing it to lose heat quickly. Incidentally, the neck is also a place of easy heat loss, so keep that scarf on as well! Though it is important to prevent general heat loss, the most important reason to keep your head warm and protected is that the brain requires the most blood, and needs that blood to be the right temperature. Your brain controls everything else in your body (your ability to think and act, as well as the ability for your body to maintain a particular temperature). Symptoms of hypothermia include confusion, weakness, and slowed breathing. It's really critical to make sure your brain is getting all it needs, or else your body will shut down!

To use the chart, find the approximate temperature on the top of the chart. Read down until you are opposite the appropriate wind speed. The number which appears at the intersection of the temperature and wind speed is the wind chill index.

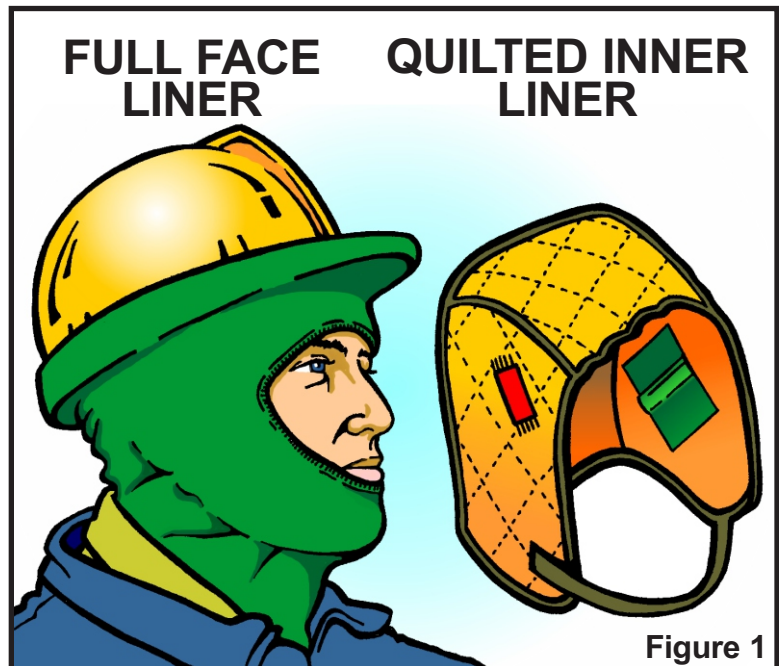


Figure 1

WIND CHILL CHART

		WIND VELOCITY (MPH)										
		Calm	5	10	15	20	25	30	35	40	45	50
TEMPERATURE (°F)	40	36	34	32	30	29	28	28	27	26	26	
	35	31	27	25	24	23	22	21	20	19	19	
	30	25	21	19	17	16	15	14	13	12	12	
	25	19	15	13	11	9	8	7	6	5	4	
	20	13	9	6	4	3	1	0	-1	-2	-3	
	15	7	3	0	-2	-4	-5	-7	-8	-9	-10	
	10	1	-4	-7	-9	-11	-12	-14	-15	-16	-17	
	5	-5	-10	-13	-15	-17	-19	-21	-22	-23	-24	
	0	-11	-16	-19	-22	-24	-26	-27	-29	-30	-31	
	-5	-16	-22	-26	-29	-31	-33	-34	-36	-37	-38	
	-10	-22	-28	-32	-35	-37	-39	-41	-43	-44	-45	
	-15	-28	-35	-39	-42	-44	-46	-48	-50	-51	-52	
	-20	-34	-41	-45	-48	-51	-53	-55	-57	-58	-60	
-25	-40	-47	-51	-55	-58	-60	-62	-64	-65	-67		
-30	-46	-53	-58	-61	-64	-67	-69	-71	-72	-74		
-35	-52	-59	-64	-68	-71	-73	-76	-78	-79	-81		

Frostbite Times

30 minutes

10 minutes

5 minutes

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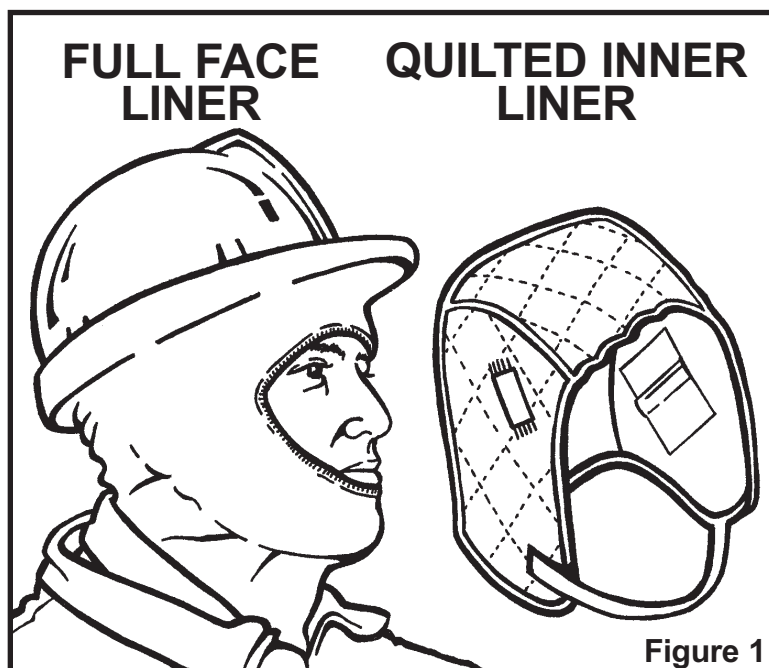


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	20	13	9	6	4	3	1	0	-1	-2	-3	
	15	7	3	0	-2	-4	-5	-7	-8	-9	-10	
	10	1	-4	-7	-9	-11	-12	-14	-15	-16	-17	
	5	-5	-10	-13	-15	-17	-19	-21	-22	-23	-24	
	0	-11	-16	-19	-22	-24	-26	-27	-29	-30	-31	
	-5	-16	-22	-26	-29	-31	-33	-34	-36	-37	-38	
	-10	-22	-28	-32	-35	-37	-39	-41	-43	-44	-45	
	-15	-28	-35	-39	-42	-44	-46	-48	-50	-51	-52	
-20	-34	-41	-45	-48	-51	-53	-55	-57	-58	-60		
-25	-40	-47	-51	-55	-58	-60	-62	-64	-65	-67		
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