



Exposure points system and ready-reckoner

The table below is a 'ready reckoner' for calculating daily vibration exposures. All you need is the vibration magnitude (level) and exposure time. The ready-reckoner covers a range of vibration magnitudes up to 40 m/s² and a range of exposure times up to 10 hours.

The exposures for different combinations of vibration magnitude and exposure time are given in exposure points instead of values in m/s² A(8). You may find the exposure points easier to work with than the A(8) values:






- exposure points change simply with time: twice the exposure time, twice the number of points;
- exposure points can be added together, for example where a worker is exposed to two or more different sources of vibration in a day;
- the exposure action value (2.5 m/s² A(8)) is equal to 100 points;
- the exposure limit value (5 m/s² A(8)) is equal to 400 points;

Vibration magnitude, a_{hw} (m/s ²)	Exposure time, T										
	5 min	15 min	30 min	1 h	1 h 30 min	2 h	3 h	4 h	5 h	6 h	
40	265	800									Above exposure limit value
30	150	450	900								Likely to be at or above limit value
25	105	315	625	1250							Above exposure action value
20	67	200	400	800	1200						Likely to be at or above action value
19	60	180	360	720	1100	1450					Below exposure action value
18	54	160	325	650	970	1300					
17	48	145	290	580	865	1150					
16	43	130	255	510	770	1000					
15	38	115	225	450	675	900	1350				
14	33	98	195	390	590	785	1200				
13	28	85	170	340	505	675	1000	1350			
12	24	72	145	290	430	575	865	1150	1450		
11	20	61	120	240	365	485	725	970	1200	1450	
10	17	50	100	200	300	400	600	800	1000	1200	
9	14	41	81	160	245	325	485	650	810	970	
8	11	32	64	130	190	255	385	510	640	770	
7	8	25	49	98	145	195	295	390	490	590	
6	6	18	36	72	110	145	215	290	360	430	
5.5	5	15	31	61	91	120	180	240	305	365	
5	4	13	25	50	75	100	150	200	250	300	
4.5	3	10	21	41	61	81	120	160	205	245	
4	3	8	16	32	48	64	95	130	160	190	
3.5	2	6	13	25	37	49	74	98	125	145	
3	2	5	9	18	27	36	54	72	90	110	
2.5	1	3	6	13	19	25	38	50	63	75	
2	1	2	4	8	12	16	24	32	40	48	
1.5	0	1	2	5	7	9	14	18	23	27	
1	0	1	1	2	3	4	6	8	10	12	

Using the ready reckoner

1. Find the vibration magnitude (level) for the tool or process (or the nearest value) on the grey scale on the left of the table.
2. Find the exposure time (or the nearest value) on the grey scale across the bottom of the table.
3. Find the value in the table that lines up with the magnitude and time. The illustration shows how it works for a magnitude of 5 m/s² and an exposure time of 3 hours: in this case the exposure corresponds to 150 points.
4. Compare the points value with the exposure action and limit values (100 and 400 points respectively). In this example the score of 150 points lies above the exposure action value.

The colour of the square containing the exposure points value tells you whether the exposure exceeds, or is likely to exceed, the exposure action or limit value:

	Above limit value
	Likely to be above limit value
	Above action value
	Likely to be above action value
	Below action value

5. If a worker is exposed to more than one tool or process during the day, repeat steps 1 – 3 for each one, add the points, and compare the total with the exposure action value (100) and the exposure limit value (400).