

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:

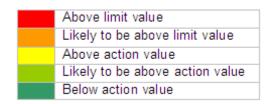
- exposure points change simply with time: twice the exposure time, twice the number of points;
- exposure points can be added together, for example where a worker is exposed to two or more different sources of vibration in a day;
- the exposure action value (2.5 m/s2 A(8)) is equal to 100 points;
-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

	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			
Vibration magnitude, and (m/s²)	19	60	180	360	720	1100	1450		Below exposure action value			
	18	54	160	325	650	970	1300					
	17	48	145	290	580	885	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	385	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	77.0	
	7	8	25	49	98	145	195	295	390	490	590	
	6	6	18	36	72	110	145	215	290	360	430	
	75.5	5	15	31	61	91	120	100	240	305	365	
	5	-	- 13	25	30	73	100	150	200	250	300	
	$\overline{\hspace{1cm}}$	3	10	21	41	61	81	$\overline{}$	160	205	245	
	4	3	8	16	32	48	64		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	1	18	23	27	
	1	0	1	1	2	3	4	$\overline{}$	8	10	12	
		5 min	15 min	30 min	1 h	1 h 30 min	2 h	3 h	4 h	5 h	6 h	
	Exposure time, T											

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:



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).