

Marine Beaufort Scale

Force / Warning	Short Description	Specifications for use on Sea	Wave height* (metres)	Wind speed** at 10m above ground level		
				Knots	mph	km/h
0	Calm	Smoke rises vertically		< 1	< 1	< 1
1	Light air	Ripples	0.1 (0.1)	1–3	1–3	1–5
2	Light breeze	Small wavelets	0.2 (0.3)	4–6	4–7	6–11
3	Gentle breeze	Large wavelets, crests begin to break	0.6 (1)	7–10	8–12	12–19
4	Moderate breeze	Small waves, becoming larger; fairly frequent white horses	1 (1.5)	11–16	13–18	20–28
5	Fresh breeze	Moderate waves, taking a more pronounced, longer form; many white horses are formed. Chance of some spray	2 (2.5)	17–21	19–24	29–38
6 	Strong breeze	Large waves begin to form; the white foam crests are more extensive everywhere. Some spray	3 (4)	22–27	25–31	39–49
7 	Near gale	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind	4 (5.5)	28–33	32–38	50–61
8 	Gale	Moderately high waves of greater length; edges of crests begin to break into spindrift. The foam is blown in well-marked streaks	5.5 (7.5)	34–40	39–46	62–74
9 	Strong gale	High waves. Dense streaks of foam along the direction of the wind. Crests of waves begin to topple, tumble and roll over	7 (10)	41–47	47–54	75–88
10 	Storm	Very high waves with long overhanging crests. The resulting foam, in great patches, is blown in dense white streaks, along the direction of the wind. The whole surface of the sea takes on a white appearance. Visibility affected	9 (12.5)	48–55	55–63	89–102
11 	Violent storm	Exceptionally high waves (small and medium ships might be, for a time, lost to view behind the waves). The surface is covered with long white patches of foam lying along the direction of the wind. Everywhere, the edges of the wave crests are being blown into the froth. Visibility affected	11.5 (16)	56–63	64–72	103–117
12 	Hurricane	The air is filled with foam and spray. Sea completely white with driving spray.	14 (-)	64>	73>	117>

*Wave height is only intended as a guide to what may be expected in the open sea. Bracketed figures indicate the probable maximum wave height.

**Wind speed is mean speed (i.e. the wind speed averaged over 10 minutes).