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Yachtly Crew

BEAU-FORT

SCALE

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SAFFIR-

SIMPSON

HURRICANE

SCALE

Quick Reference: Knots to
MPH Conversion



BEAU-FORT SCALE

A scale of wind speed based on a visual estimation of the wind's effects, ranging from force 0 (less than 1 knot or 1 mph, "calm") to force 12 (64 knots or 74 mph and above, "hurricane").

SAFFIR-SIMPSON HURRICANE SCALE

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale estimates potential property damage.



KNOTS VS MPH

One knot equals one nautical mile per hour, or roughly 1.15 statute mph

1 knot = 1.15 mph



**QUICK REFERENCE:
KNOTS TO MPH
CONVERSION**

Knots & MPH

5 Knots = 5.8 MPH

10 Knots = 11.5 MPH

15 Knots = 17.3 MPH

20 Knots = 23.0 MPH

25 Knots = 28.8 MPH

30 Knots = 34.6 MPH

35 Knots = 40.3 MPH

40 Knots = 46.1 MPH

45 Knots = 51.8 MPH

50 Knots = 57.6 MPH

55 Knots = 63.4 MPH



**QUICK REFERENCE:
KNOTS TO MPH
CONVERSION**

Knots & MPH

60 Knots = 69.1 MPH

65 Knots = 74.9 MPH

70 Knots = 80.6 MPH

75 Knots = 86.4 MPH

80 Knots = 92.2 MPH

85 Knots = 97.9 MPH

90 Knots = 103.7 MPH

95 Knots = 109.4 MPH

100 Knots = 115.2 MPH

105 Knots = 121.0 MPH

110 Knots = 126.7 MPH

**QUICK REFERENCE:
KNOTS TO MPH
CONVERSION**

Knots & MPH

115 Knots	=	132.5 MPH
120 Knots	=	138.2 MPH
125 Knots	=	144.0 MPH
130 Knots	=	149.8 MPH
135 Knots	=	155.5 MPH
140 Knots	=	161.3 MPH
145 Knots	=	167.0 MPH
150 Knots	=	172.8 MPH

BEAU-FORT SCALE Force 0

Calm - Sea like a mirror.
Calm; smoke rises vertically.

0 - 1 mph ~ 0 - 1 knots

BEAU-FORT SCALE Force 1

Light Air – Ripples with the appearance of scales are formed, but without foam crests.

1 - 3 mph ~ 1 - 3 knots

BEAU-FORT SCALE Force 2

Light Breeze - Direction of wind shown by smoke drift, but not by wind vanes.
Small wavelets, still short, but more pronounced. Crests have a glassy appearance and do not break

4 - 7 mph ~ 4 - 6 knots

BEAU-FORT SCALE Force 3

Gentle Breeze - Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered white horses.

8 - 12 mph ~ 7 - 10 knots

BEAU-FORT

SCALE

Force 4

Moderate Breeze - Small waves, becoming larger; fairly frequent white horses. Raises dust and loose paper; small branches are moved.

13 - 18 mph ~ 11 - 16 knots

BEAU-FORT SCALE Force 5

Fresh Breeze - Moderate waves, taking a more pronounced long form; many white horses are formed. Small trees in leaf begin to sway; crested wavelets form on inland waters.

19 - 24 mph ~ 17 - 21 knots

BEAU-FORT SCALE Force 6

Strong Breeze - Large waves begin to form; the white foam crests are more extensive everywhere. Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.

25 - 31 mph ~ 22 - 27 knots

BEAU-FORT SCALE Force 7

Near Gale - Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.

Whole trees in motion; inconvenience felt when walking against the wind.

32 - 38 mph ~ 28 - 33 knots

BEAU-FORT SCALE

Force 8

Gale – Moderately high waves of greater length; edges of crests begin to break into spindrift. The foam is blown in well-marked streaks along the direction of the wind.

Breaks twigs off trees; generally impedes progress.

39 - 46 mph ~ 34 - 40 knots

BEAU-FORT SCALE

Force 9

Severe Gale - High waves.
Dense streaks of foam along
the direction of the wind.

Crests of waves begin to
topple, tumble and roll over.

Spray may affect visibility

Slight structural damage
occurs (chimney-pots and
slates removed)

47 - 54 mph ~ 41 - 47 knots

BEAU-FORT

SCALE

Force 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. On the whole the surface of the sea takes on a white appearance.

55 - 63 mph ~ 48 - 55 knots

BEAU-FORT

SCALE

Force 10

Storm - The tumbling of the sea becomes heavy and shock-like. Visibility affected. Seldom experienced inland; trees uprooted; considerable structural damage occurs.

55 - 63 mph ~ 48 - 55 knots

BEAU-FORT

SCALE

Force 11

Violent Storm – Exceptionally high waves (small and medium-size ships might be for a time lost to view behind the waves). The sea is completely covered with long white patches of foam lying along the direction of the wind. Everywhere the edges of the wave crests are blown into froth. Visibility affected.

64 - 72 mph ~ 56 - 63 knots



BEAU-FORT SCALE Force 12

Hurricane – Very rarely experienced; accompanied by wide-spread damage.

The air is filled with foam and spray. Sea completely white with driving spray; visibility very seriously affected.

72 - 83 mph ~ 64 - 71 knots



SAFFIR-SIMPSON HURRICANE SCALE

Category One

Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.

74 - 95 mph ~ 64 - 82 knots

SAFFIR-SIMPSON HURRICANE SCALE

Category Two

Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.

95 - 110 mph ~ 83 - 95 knots

SAFFIR-SIMPSON HURRICANE SCALE

Category Three

Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.

111 - 129 mph ~ 96 - 112 knots

SAFFIR-SIMPSON HURRICANE SCALE

Category Four

Catastrophic damage will occur:
Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

130 - 156 mph ~ 113 - 136 knots



SAFFIR-SIMPSON HURRICANE SCALE

Category Five

Catastrophic damage will occur:
A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

157+ mph ~ 137+ knots