

# James Cook Bill of Materials

The following list of materials is intended to be a general guide only. Before ordering any materials, the text and plans should be checked for possible options. All lumber listed as 1" stock is to be standard "lumberyard four-quarter" material which when finished may vary to somewhat less or slightly more than 3/4" in thickness. All widths are NET and all lengths allow for cutting to fit. Grouping lumber and purchasing random-random material to resaw to the required size will result in considerable savings. All lumber used should be first grade free from shakes and knots. Although spruce (Sitka variety) and mahogany (dark red Philippine type) are called out in the listing, lumber typical to the locale and of similar types and weights may be substituted. All plywood (PW) is to be marine (MAR) or exterior (EXT) grade. The marine-type is preferable as the inner cores are solid and thus the panel has more structural integrity. Douglas-fir (DF) is satisfactory with the quality of the exposed faces of the veneer being designated by the letters "A" or "B". The "AA" grade panels are always preferable, however, "AB" grade is acceptable. All plywood should be a minimum of three plies. All fastenings should be bronze or hot dipped galvanized ferrous metal. Brass fastenings are not advised nor are the electroplated screws commonly sold in hardware stores. All screws are to be of the flat head type intended for wood. All nails are of the ring-type nail common to boat construction. Unless otherwise specified, all wood-to-wood joints are to be glued with a waterproof or highly water resistant glue such as plastic resin, resorcinol, epoxy, or other equivalent type used per the manufacturer's instructions regarding temperature, clamping requirements, curing time, and mixing method.

**HULL MATERIAL LISTING:** The following material listing is an estimate of the materials required to build the basic hull of the vessel. The material listing is intended to serve as a general guide and should not be used to purchase materials until the various options and alternatives have been checked to the plans and to the work wherever possible. The hull construction materials are based on the square footage of the hull and may vary somewhat depending on the materials chosen and how they are used. The figures listed include an overage factor, however, it is probable that more materials may be required due to waste, defects, sizes, types of material available, etc. The listings do not include materials for the cabin structure or joinerywork due to the many possible variations in both the plans as well as the owner's desires, and the fact that scrap materials from the hull may be used. In all cases, check to the plans and these instructions for options.

### FIBERGLASS HULL MATERIAL LISTING - FOAM SANDWICH METHOD:

- Foam material (PVC) 1/2" thick x 3' x 6' - 20 sheets
- Fiberglass mat 3/4 oz. per square foot - 103 lbs. or 2200 sq. ft.
- Fiberglass woven roving 18 oz. per square yard - 225 lbs. or 1800 sq. ft.
- Polyester resin w/catalyst - 750 lbs. (approx. 75 gals.)

### FIBERGLASS HULL MATERIAL LISTING - FIBERGLASS PLANKING METHOD:

- Fiberglass planking "CF-65", 12" wide x lineal feet - 400'
- Fiberglass mat 3/4 oz. per square foot - 103 lbs. or 2200 sq. ft.
- Fiberglass woven roving 18 oz. per square yard - 225 lbs. or 1800 sq. ft.
- Polyester resin w/catalyst - 750 lbs. (approx. 75 gals.)
- Non-thixotropic laminating resin for initial coat, FG Planking - 150 lbs. (approx. 15 gals.)

### HULL MATERIAL LISTING - PLYWOOD & LUMBER CONSTRUCTION METHOD

ITEM	NO. PCS	SIZE
<p><b>LUMBER:</b> Lumber typical to the locale and proven in use in boats of similar type and size can be used, however, dense heavy woods should be avoided to keep weight down. Suitable types include the various mahoganies (both Philippine and Honduras), Douglas-fir, Sitka spruce, Alaska cedar, Port Orford cedar, and western larch. Traditional boat building woods such as white oak, apitong, teak, and long-leaf yellow pine, are generally heavier than recommended.</p>		
Framing members	120 bd ft. - 1" (four quarters) random-random stock in as long of lengths as possible at least 6" wide and preferably much wider 20 bd. ft. - 1-1/4" (five quarters)	
Keel	2 rqd.	1-1/4" x 10" x 21'
Rudder skeg	1" x 5" x 60 lin. ft. OR 2" x 5" x 30 lin. ft.	

Hull battens	16 rqd.	1" x 1-1/2" x 27'
Sheer clamps	4 rqd.	1" x 2" x 28'
Floor timbers	15 bd ft. - 2" (eight quarter) random-random stock with some widths to 9" <i>plus</i> 2" NET stock with some widths to 8" x 20 lin. ft.	
Bowsprit	1 rqd.	3" x 3" x 6'
Bowpiece	1 rqd.	2" x 12" x 4'
Mooring bitts	2 rqd.	2" x 4" x 4'
Sheer cleats	2 rqd. 2 rqd.	1" x 1-1/2" x 29' 1/2" NET x 1-1/2" x 29'
Bulwark cap	1" stock of widths to suit curvature, 65 lin. ft.	
Motor stringers	1 rqd.	2" x 8" x 6'
Motor stringer blocking	1 rqd.	2" x 2" x 4'
<b>PLYWOOD:</b>		
Hull planking	1000 square foot of 3/16" (5mm) plywood	
Stem, breasthook, transom & floor timbers	2	3/4" x 4' x 8'

Structural bulkheads	4 3	3/8" x 4' x 8' 1/2" x 4' x 8'
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**FASTENINGS:**

- SCREWS: Flat head wood type, bronze or hot dipped galvanized iron.
- 1-1/4" #8 Screws - 8 gross
- 1-1/2" #8 Screws - 12 gross
- 2" #10 Screws - 1 gross
- 3" #14 Screws - 3 dozen
  
- NAILS: Ring type, Bronze or Monel
- 1 #12- 1 pounds
- 1-1/4" #12 - 1 pound