



B&B Yacht Designs

MATERIAL LIST For **Ocracoke 20**

The amount of materials shown here is calculated on the basis of good economical use. If you tend to make a pint of epoxy when you only need a spoonful, you will need extra; and if you tend to cut first and measure later and have to re-do several items, you will find yourself short. Therefore, please realize that **these quantities are only a guide.**

Solid stock wood choices depend on availability. The boats are designed for commonly available materials like fir, spruce etc... We don't recommend heavy or exotic woods for interior framing. They are hidden anyway. Surprisingly, some of the well known woods for boatbuilding are not ideal for this method. Teak and oak do not glue well, not to mention they are heavy.

If you wish to use a touch of fine hardwoods for trim, that is lovely. For example, gunwales triple laminated of spruce or fir against the hull with mahogany in the middle and ash on the outside is not only pretty. It is also practical and keeps the weight to a minimum, while offering the hard ash to take the bumps and bangs. You can make lovely rudders, centerboards and tillers with different wood combinations! Be creative and artistic.

To help understand what goes where, we have in some instances listed our solid stock wood materials by the item which is shown in the first column and relates to the part as shown on the plan. The second column is the dimension of the finished lumber. If this finished size is not a standard lumber yard finished size, it will have an asterisk. This means that you will be ripping the correct sizes from the nearest available size as suggested or another size as is available to you. The third column is the length of lumber needed, based on standard commonly available lumber lengths. The fourth column is the common USA "name" of the size – or the name you will use when ordering the wood. Your average Joe or Jill at the local builders supply probably doesn't know the finished dimensions of standard lumber

...and if you asked for a “6’ length of $\frac{3}{4}$ X 3 $\frac{1}{2}$ ” “ you would probably be told they “don’t have it” – but when you ask for a 6’ length of 1X4 you will have no problems. The last column gives the number of pieces of that size required for that item.

Please note that dimensions are given in both English and Metric Systems. As standard metric sizes vary from country to country, you may have to adapt the suggestions to your national standards. This particularly true of solid lumber sizes. Choose the nearest equivalent size that is the same or slightly larger than the dimension given. Metric users should ignore column 4.(the “name” column)

Fasteners are very difficult to calculate to give quantities in exact numbers. Where a specific fastener is needed in a critical application, we have specified it. For all others, please extrapolate for your own needs. If you have many clamps, you don’t need too many screws, conversely, you’ll want a larger number if you don’t have many clamps. Note: For some of our more advanced plans we do not give fastenings quantities.

For temporary fasteners, we recommend the use of drywall screws (also called sheetrock screws), which can be easily removed, and their holes filled with epoxy. If you do not want to mar the surface for a bright finish, use clamps, either commercial or simple ones we describe at the end of this list. You should have an assortment of sizes on hand. Even after your boat project is finished, you will find these incredibly handy around the house for other projects.

All of our plywood plans call for the use of epoxy. Under no circumstances should you substitute polyester for epoxy. They are not the same. Polyester will fail in a few years. Use a good brand of marine epoxy – see the material source list (US residents) if you can’t find it locally.

We are often asked to recommend finishing paints. We like the two part linear polyurethanes and modified acrylic urethanes. While these two part products are a more expensive and difficult to apply, they are much harder and last much longer. If you decide to go with single part paint, at least, use a top of the line marine enamel. And, regardless of system, unless you are experienced in the area of paint chemistry, use all the products from a single supplier and for a single line – this way you will have compatibility from primer to finish. Lastly, and importantly, follow the manufacturer’s recommendation with regard to equipment and preparation.

Should you have questions about materials, please let us know and we will try to help you.

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Remember when the urge to shave the costs hits you, the most precious thing you will put into this boat is your love and labor, honor them with good materials.

You will be repaid by a lifetime of low maintenance, a family heirloom, or a much higher return on your boat if you should sell her.

Plywood items not listed here are made from off cuts from the listed items

MARINE PLYWOOD

Okume, Khaya, Meranti , Luan or other marine plywood (BS1088)

Item	Thickness	Size	Number
Temporary frames*	5/8" - 3/4" (18mm)	4X8 (1220 X2500)	2
Frames	1/2" (12mm)	4X8 (1220X2500)	4
Transom	3/16" (4mm)	4X8 (1220 X2500)	3
Bottom stringers	3/8" (9mm)	4X8 (1220 X2500)	2
Bottom aft	1/2" (12mm)	4X8 (1220X2500)	2
Bottom forward	1/4" (6mm)	4X8 (1220X2500)	4
Topsides	3/16" (4mm)	4X 8 (1220X2500)	9
Sole	3/8" (9mm)	4X8 (1220X2500)	4
Decks	3/8" (9mm)	4X8 (1220X2500)	3
Console+	3/8" (9mm)	4/8 (1220X2500)	2

*use construction grade plywood (not marine) for temporary construction items

+ some builders may prefer to use commercially made console and/or seat units

SOLID STOCK fir or equivalent light, straight grained wood is suggested

Item	Dimension	Length	USA Name	Number
Stem (cntr)	1" X 9 1/4"	10	5/4/ X 10	1
Stem (side)	3/4" X 9 1/4"	10	1 X10 (or 12**)	1
Keel	1" X 3"	12	2 X 4 rip	1
Keel sides	3/4" X 9 1/4"	16	1 X 10	2
Chine log	1" X 1 1/2"	20'	5/4 rip	2
Inter. Sheer	1"X 1 1/2"	20'	5/4 rip	2
Lower Side stringers	3/4 " X 1"	20	2X4 rip	4
Upper side stringers	3/4" X 1"	12' 10'	1X2 rip	2 2
Sheer clamp	3/4" X 3/4"	16	1 X1	8
Sole/hull stringers	3/4" X 1"	7 12	1X2rip	2 2
Cockpit beams	1" X 2"	20	2 X 4rip	1
Cockpit frm. Tops	3/4" X1"	85' total	1 X 2 rip	4-16' 4-8'
Deck Frame	1 X 2	20	2 X 4rip	1
King Plank	3/4" X 3 1/2"	3	1 X 4	1

Solid stock (continued)

Item	Dimension	Length	USA Name	Number
Aft blkhd beam & fore deck beam		8	1 X 6	1

Rip = not a standard size: rip from larger size specified

** for a less tight layout option

Epoxy

24 – 30 gallons (110 – 120 liters)

Epoxy enhancement products: Fillers, thickeners, etc...

Fiberglass

10 oz. minimum.

Depending on the width you use, the length will vary – however for 50" wide cloth, you will require about 200 running feet.

Hardware

Cleats, fairleads

Locker hinges

Optional

Keel & Stem Chafe Strip (optional) of 5/8" - 3/4" SS or brass strip. Optional stem piece may be 1/2 oval or flat as available, as this is easier to bend around.

TOOLS (*nice but optional*)

Saws: electric jigsaw or hand and coping saws

Table saw, skill saw

Drill with bits, counter sink bits

Orbital or palm sander for finishing

Plane: hand plane #4 Stanley or equivalent

assorted types such as block, etc...

pliers with wire cutters; *dedicated wire cutters*; hammer;

screwdrivers: flat and Philips assorted;

chisels: assorted

steel tape measure(s)

clamps* assorted types and sizes

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SHOP ITEMS some suggestions, by no means a complete list:

Masks

Basic type for dust, and filter type for epoxy if you are sensitive

Safety goggles

Rubber gloves

Latex or nylon medical gloves, or rubber or latex dishwashing type

Tyvek (or equivalent) work suit(s)

These not only protect your clothing, but add another layer of safety against epoxy- for sensitivity exposure

Assorted mixing and filleting sticks

tongue depressors, popsicle sticks, paint stirrers, shaped plywood

Vinegar

for cleaning un-cured epoxy from tools, brushes, hands and boat

cheap, safe and effective – follow with good soap and water washing to eliminate any stickiness

Acetone

For more difficult clean up, when epoxy has begun to cure. Use with caution.

Assorted sand paper

from 60-220 grit, majority of use will be 80-150 grits. You will want at least some of it to be wet and dry, or use nylon sanding pads for wet sanding.

Assorted brushes

Chip (throw away); foam; and bristle (for finishing if required) Sizes from ½” to 3” – most will be 1 ½ “- 2”

Squeegee(s)

For spreading epoxy. May be rubber or soft plastic

Plastic

For releasing epoxy: may be plastic bags (watch writing – it will come off) or roll plastic – such as light construction type. Also for laying down over work surface(s) to keep things clean.

Saw horses set for your working comfort; workbench or table.

Assorted drywall screws

For temporary holding