

Reliant Bill of Materials

LUMBER & PLYWOOD: Do NOT purchase any lumber until you read this section. Do NOT purchase any NET sized material unless the lumber size noted on the plans is specifically noted as "NET". All lumber thickness specified should be purchased as standard lumberyard stock finished as full as possible except for lumber noted specifically as "NET". It is a common mistake for builders to see a lumber thickness noted, for example as 1" stock, thinking that this is the NET thickness, then attempt to purchase this and find that it must be custom milled to thickness. Such is not the case. Instead, when lumber is listed as 1" stock, it is purchased as "four quarters" material which will finish from 3/4" to 7/8" in new finished thickness. This means that custom milling is not required, and the standard lumberyard variation has been allowed for in the design of the vessel. This is intended to save the builder money. All widths, however, are noted as net. An exception to this is material which is listed 2" or thicker, which usually finishes somewhat less in both dimensions and is especially common with soft wood species such as Douglas-fir. Grouping lumber and purchasing "random-random" material to resaw to the required size will result in considerable savings. All lumber required should be checked for size to the work for accuracy before purchasing wherever possible. All plywood must be intended for marine or exterior use. Interior grades are not acceptable. The marine grade core features inner solid plies, while the exterior plywood cores may have inner voids not apparent to the eye. In most cases, the glues used in both types are the same waterproof type. All plywood is preferably five ply type if available, with the best face being exposed. Douglas-fir plywood is acceptable for all plywood, although various hardwood veneer types can be used alternately. In any case, all plywood used should be free of exposed or unpatched knots. All lumber used should be first grade free from knots, shakes, checks or other defects. Lumber typical to the locale and proven in use in boats in the locale of similar type and size can be used. Suitable woods include white oak, mahogany (both Philippine and Honduras types), Sitka spruce, Douglas-fir, longleaf yellow pine, Port orford cedar, apitong, and teak. Throughout the construction, all wood joints should be adequately glued with a hard-setting glue such as plastic resin or epoxy.

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 only and should not be used to purchase materials until the various options and alternatives have been checked to the plans and to the work. The hull construction materials are based on the square footage of the hull and may vary somewhat depending on the materials used and how they are utilized. The figures listed include an overage factor, however it is probable that more materials may be required due to waste, defects, sizes

and types of material available, etc. The listing does 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. In all cases, check the plans and instructions for options.

HULL MATERIAL LISTING - FOAM SANDWICH METHOD:

- Foam material (PVC) 3/4" thick x 3' x 6': 60 sheets
- Fiberglass mat 1 oz. per square foot: 464 lbs. or 7430 sq. ft.
- Fiberglass woven roving, 18 oz per sq. yard: 780 lbs. or 6230 sq. ft.
- Polyester resin w/catalyst: 6 drums (55 gal. size) or approx. 3000 lbs. net

HULL MATERIAL LISTING - FIBERGLASS PLANKING METHOD:

- Fiberglass planking "CF-65", 12" wide x lineal feet: 1300'
 - Fiberglass mat 1 oz. per square foot: 578 lbs. or 9248 sq. ft.
 - Fiberglass woven roving 18 oz. per square yard: 843 lbs. or 6742 sq. ft.
 - Polyester resin w/catalyst: 6 drums (55 gal. size) or approx 3000 lbs. net
- Approx. 50 gals. or 500 lbs. non-thixotropic laminating resin for fiberglass planking initial coat.

HULL MATERIAL LISTING - PLYWOOD & LUMBER CONSTRUCTION METHOD:

ITEM	SIZE	LENGTH OR NO. RQD.
LUMBER:		
Bulkhead framing members	1" (four quarters) random-random stock in as long of lengths as possible at least 6" wide and preferably much wider - 300 bd. ft. (total hull thickness: 1")	
Floor timbers	3" (twelve quarters) random-random stock at least 12" in width- 200 bd. ft. 4" (sixteen quarters) random-random stock, some widths at least 13" wide - 400 bd. ft.	

Longitudinal battens	1-1/4" x 2" x 42' 1-1/4" x 2" x 44' 1-1/4" x 2" x 46' 1-1/4" x 2" x 48' 1-1/4" x 2" x 50'	8 required 4 required 8 required 8 required 8 required
Sheer clamps	1" x 3" x 54'	6 required
Motor stringers	2" x 8" x 9'	2 required
PLYWOOD:		
Hull planking	4000 square feet 1/4" plywood	
Transom	3/4" x 4' x 8'	3 sheets
Stem	3/4" x 4' x 8'	2 sheets
Structural bulkheads	3/4" x 4' x 8'	30 sheets
Keel laminations	3/4" x 4' x 8'	8 sheets