

Mackinaw

Plywood Bill of Materials

MATERIAL LISTING: The following is an approximation that can be used for hull cost estimates; it is not meant to be used for buying materials without first checking the instructions and plans for various options which will vary the listing (especially with regard to planking panel sizes, powering choices, laminated members, etc.), and to local suppliers for what material sizes may be available. In other words, each builder must make decisions as to how he will build the boat and use materials, and then take off a listing to suit. As a cost savings, materials should be grouped for resawing to the sizes required. Plywood panel lengths are given to cover the length of the vessel although stock panels of the listed size may not be available. See previous herein for options and alternatives.

PLYWOOD: All plywood should be at least AB Exterior or Marine grade; Interior plywood is not acceptable. Douglas-fir or Mahogany-type panels will suffice.

LUMBER: All lumber should be top quality, free from defects, and of types proven in use in boats. Suitable woods include vertical grain Douglas-fir, Alaskan cedar, mahogany (including Philippine, Honduras, and African types), and good quality Southern pine. Lumber thicknesses are given as nominal except where noted "net" or those listed as less than 1". Do NOT custom mill any lumber except those noted "net" or less than 1". Purchase lumber as it comes from the lumberyard. The first dimension is the thickness, but true thickness will be somewhat less than nominal for 1" to thicker listings. For example, lumber listed 1" will actually be about 3/4", while 2" lumber will actually be about 1-1/2" net. The second dimension is the width - this is to be actual or "net" size except that members 2" thick can be nominal in BOTH thickness and width. In other words, a 2" x 4" member will actually be about 1-1/2" x 3-1/2" - buy it and use it this way. Such listed sizes are meant to save the builder money and work.

ITEM	SIZE	NO. PCS.	
LUMBER:			

Framing, beams	1" nom. ("four-quarter") x 60 bd.ft. with some widths to 7"		
Keel	1" x 4" x 15'	2	
Bottom battens	1" x 2-1/2" x 18' 1" x 2-1/2" x 17' 1" x 2-1/2" x 16'	2 2 2	
Outer chine logs	7/8" NET x 1-1/8" x 20'	2	
Inner chine logs	13/16" NET SQ x 20' 3/4" NET x 1" x 20'	6 2	
Sheer clamps	5/8" NET x 1-1/4" x 23'	4	
Carlings	1" x 2" x 18'	2	
Cabin clamps	1" x 3" x 8'	2	
Deck battens	1" x 2" 1" x 3"	6' 4'	
PLYWOOD:			
ITEM	SIZE	NO. PCS.	
Transom, stem, breasthook, floor timbers	3/4" x 4' x 8'	2	
Bottom planking (*)	1/4" x 4' x 20'	4	
Side planking (*)	3/8" x 4' x 23'	2	
Decking	1/2" x 4' x 8'	3	
Gussets, floor timbers	1/2" x 4' x 8'	2	
Bulkheads	1/2" x 4' x 8' 3/8" x 4' x 8'	2 1	
(*) See plans for joining methods to permit other panel lengths			

FASTENINGS:

- **Screws:** Flathead wood type, bronze or hot dipped galvanized
- 1" #8 = 400
- 1 1/4" #8 = 1500
- 1 1/2" #8 = 200
- 2" #10 = 200
- 3" #14 = 10

- **Nails:** Ring type boat nails, bronze or Monel
- 1" #12 = 3 lbs.
- 1-1/4" #12 = 1 lb.

Adhesives: Epoxy adhesives are advised throughout the construction. These may be an epoxy adhesive or epoxy resin. Epoxy resins should be used with thickeners (silica or equal) per the instructions with the resin and/or thickening agent. Due to the noted options, the amount required is difficult to estimate. Start with a gallon container of epoxy and after use you will be better able to estimate the total amount required.