

TUBBY TUG BILL OF MATERIALS

The following lists the materials required to build the basic hull and does not include the cabin. Lumber and plywood required for the cabin are noted on Pattern sheet 2 of 2.

LUMBER: Mahogany, Douglas-fir, spruce, oak, or most any type of clear dry wood is acceptable. All widths are listed as NET size, while lengths allow for cutting to fit. The prototype used spruce for all cleats and similar parts and dark red Philippine mahogany for exposed members such as breasthook, sheer, bumper rail, and cabin parts. All lumber is intended to be cut or ripped from 1" lumberyard size stock; this will mean a new thickness after milling of about 3/4". A 1" x 3/4" cleat is ripped from 1" stock to a 3/4" width; this results in a piece 3/4" x 3/4". Parts listed as 1/2" or 5/8" are ripped to this thickness from 1" stock. It is recommended that the lumber to be purchased in wider widths and longer lengths and resawn to the required size.

ITEM	NO. PCS	SIZE
Cleats on #2	1	1" x 3/4" x 48"
	1	1" x 3/4" x 38"
Cleats on #3	2	1" x 3/4" x 33"
	2	1" x 1" x 7"
Cleats on #4	2	1" x 3/4" x 31"
Cleats on #5	1	1" x 1" x 19"
	1	1" x 1-1/4" x 30"
Cleats on #6	1	1" x 3/4" x 46"
Cleats on #7	2	1" x 3/4" x 6-1/2"
	2	1" x 3/4" x 6"
	2	1" x 3/4" x 7-1/2"
Cleats on #9	2	1" x 1" x 24"
	2	1" x 1-3/4" x 11"
	1	1" x 1-1/4" x 11"
#10 Bulwark Brace	1 - makes two	1 x 5" x 22"
#12 Breasthook	1	1" x 6" x 8"
Inner bulwark sheer	2	1" x 1/2" x 10'
Above, across transom	1 - makes two	1" x 1/2" x 3'
Outer bulwark sheer	2	1" x 3/4" x 10'
Above across transom	2	1" x 3/4" x 18"
Bumper	2	5/8" x 1-1/4" x 10'
Keel	1	1" x 1-1/2" x 6'-3"

PLYWOOD: All plywood is to be exterior (may have inner core voids) or marine grade (edge jointed inner core); interior grades will deteriorate in a marine atmosphere and are not recommended. Douglas-fir AB exterior plywood was used on the prototype. Plywood with veneers such as okoume or mahogany are optional. Plywood is graded by the quality of the exterior veneers with AA (best quality both sides) being preferable and AB second choice. AC panels are a very poor third choice with panels of lower grades undesirable.

#1 Bottom & #8 Knees	1	3/8" x 4' x 8'
Various parts per PLYWOOD LAYOUT	4	1/4" x 4' x 8'

STITCHING WIRE: 14-16 gauge copper wire - 50' required

RESIN: Preferably epoxy with slow hardener; optional dual purpose polyester resin with catalyst and surfacing agent. - 1 gallon

MICROSPHERES (or equal): - 1 pound

SILICA: - 1 pound

INTERIOR FIBERGLASS TAPE: 6-8 oz. 3" wide marine type treated. - 50 yards

FASTENINGS:

- **SCREWS:** Flat head wood type, bronze or hot dipped galvanized iron.
- 3/4" #8 Screws - 2 dozen
- 1" #8 Screws - 9 dozen
- 1-1/4" #8 Screws - 6 dozen

- **NAILS:** Ring type, Bronze or Monel
- 3/4" #14= 1/2 pound

EXTERIOR FIBERGLASS COVERING:

All exterior seams are covered with two layers of fiberglass tape or cloth.

FIBERGLASS COVERING OF BOTTOM, SIDES & TRANSOM: The fiberglass cloth covering the transom should lap over the bottom and sides. The cloth covering the sides should lap over the transom and the stem providing two layers over all seams except the chine and sheer which are covered with fiberglass tape plus the exterior fiberglass cloth.

- **TAPE:** 3" wide - 13 yds.
- **FIBERGLASS CLOTH:** 50" wide - 7-1/3 yds. (covers transom plus each half of boat lapping along bottom centerline, at the bow and transom, and extending over chine to bulwark sheer.)
- **RESIN:*** 1 gallon

TAPED SEAMS - IF NO FIBERGLASS COVERING: If the EXTERIOR is NOT fiberglass covered, the following tape will be required to cover the chine, sheer, stem and transom

seams. See LAMINATE SCHEDULE.

- TAPE: 3" width - 17 yds.
- TAPE: 4" width - 17 yds.
- RESIN:* 1/2 gallon

* Preferably epoxy with slow hardener; optional dual purpose polyester resin with catalyst.