Bandido-Fiberglass Bill of Materials

(Scroll down for Plywood BOM)

The following listing is an estimate of the fiberglass materials required to build the basic hull only. 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, to the work, and to the materials which may be available in the area in which the hull will be built. The listing is ony an estimate and may vary with the amount of waste encountered in the work, the sizes and types of material available, and other variables that cannot be controlled. Figures for materials listed include an overage factor or allow for fitting and trimming to size, but it is probable that additional materials may be required due to waster, defects, how the materials are utilized, etc. In all cases, check the plans and instructions for options.

HULL LAMINATE MATERIAL- FIBERGLASS PLANKING METHOD:

- Fiberglass planking "CF-65", 12" wide: 400 square feet
- Fiberglass mat 3/4 oz per square foot: 175 lbs.
- Fiberglass mat 1 oz per square foot: 30 lbs.
- Fiberglass cloth 7 oz per square yard: 300 sq. ft.
- Fiberglass woven roving 18 oz per square foot: 425 lbs.
- Polyester non-thixotropic laminating resin with catalyst for fiberglass planking: 160 lbs.
- Polyester Iso-type laminating resin with catalyst - 1200 lbs.

HULL LAMINATE MATERIAL ESTIMATE - SANDWICH CORE METHOD:

- 240 sq. ft. of one of the following:
  - 5/8" thick 5 lb. density non-cross linked PVC foam, OR
  - 3/4" thick 6 lb. density cross linked PVC foam, OR
- 1/2" thick 9 lb. density end-grain balsa core, PLUS
- 294 sq. ft. of one of the following:
  - 1/2" thick 5 lb. density non-cross linked PVC foam, OR
  - 5/8" thick 6 lb. density cross linked PVC foam, OR
  - 3/8" thick 9 lb. density end-grain balsa core
- FIBERGLASS MATERIALS:
  - 3/4 oz. shopped strand mat 160 lbs.
  - 1 oz. chopped strand mat 30 lbs.
  - 7-1/2 oz. cloth 300 sq. ft.
  - 18 oz. woven roving 375 lbs.

- RESIN: Polyester iso-type laminating resin with catalyst - 1000 lbs.

HULL LAMINATE MATERIAL ESTIMATE - HIGH-TECH VERSION:

- CORE MATERIAL:
  - 534 sq. ft. of one of the following:
    3/4" thick 6 lb. density cross linked PVC foam, OR 1/2" thick 9 lb. density end-grain balsa core
- FIBERGLASS MATERIALS: (*These materials are more costly and not as readily available as conventional laminates. They also require more care and consideration in handling, finishing and usage.*)
  - *UDR = "S-500" "ORCOWEB" (.056 lbs. per sq. ft.) or comp. - 3800 sq. ft.
  - **TRIAX = "KNYTEX/PROFORM" 34 oz. or comp. - 150 lbs.
  - 3/4 oz. chopped strand mat (w/balsa core only) - 60 lbs.
- RESIN: Polyester iso-type or vinylester laminating resin with catalyst
  - 500 lbs. (foam core)
  - 700 lbs. (balsa core)

**UDR: Unidirectional roving. Aerospace quality, preferably made from "S" type glass. Orcoweb is one brand name.*
***TRIAX: Triaxial woven roving. Fiber stands run in three directions: 0°, 45°, and 135° to the length of the fabric. This material can be made from either "E" or "S" type glass.*

PLYWOOD (REQUIRED FOR ALL VERSIONS): Douglas-fir Marine or Exterior grade. "AB" or better, 3/4" x 4' x 8' - 8 to 10 sheets

Bandido - Plywood 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 used should be first grade free from shakes and knots. Although Douglas-fir, spruce (Sitka), and mahogany (dark red Philippine type or Honduras) 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 resorcinol, epoxy, or other equivalent type used per the manufacturer's instructions regarding temperature, clamping requirements, curing time, and mixing method.
CHECK ALL SIZES TO THE WORK PRIOR TO CUTTING.
Abbreviations used are: Mahog = mahogany; SP = Spruce; DF = Douglas-fir; PW=plywood; Ext=exterior; MAR=marine.

ITEM	MATERIAL	NO. PCS.	SIZE
Bottom planking	DF, SP or Mahog veneers or MAR PW	750 sq. ft.	3/16" net thickness*
Side planking	DF, SP or Mahog veneers or MAR PW	560 sq. ft.	3/16" to 1/4" net thickness*
Raised sheer side planking	DF MAR or Ext PW AB or better	2 sheets	1/2" x 4' x 8'
Transom	DF MAR or Ext PW AB or better	2 sheets	3/4" x 4' x 8'
Rope locker bulkhead & berth tops	DF MAR or Ext PW AB or better	3 sheets	1/2" x 4' x 8'
Other bulkheads, brackets, stemhead knee	DF MAR or Ext PW AB or better	5 sheets	3/4" x 4' x 8'

Stringer webs	DF MAR PW AB or better	4 sheets	3/4" x 4' x 8'
Cockpit sole	DF MAR or Ext PW AB	2 sheets	3/4" x 4' x 8'
Cockpit coaming	DF MAR or Ext PW AB	2 sheets	1/2" x 4' x 8'
Sun deck	DF MAR or Ext PW AB	2 sheets	3/4" x 4' x 8'
Decking	DF MAR PW AB or better	5 sheets	1/2" x 4' x 8'
Drain troughs	DF Ext PW AB	1 sheets	1/2" x 4' x 8'

FASTENINGS:

- Screws: Flathead wood type, bronze or hot dipped galvanized
- 1-1/4" #8 - 5 gross
- 1-1/2" #8 - 12 gross
- 2" #10 - 10 gross
- 3" #14 - 1 gross

- Nails: Ring type boat nails, bronze or Monel
- 1-1/4" - 5 pounds
- Carriage Bolts: Bronze or hot dipped galvanized complete with nuts and washers. Check lengths to work.
- 5/16" - 30 required

**Total side planking thickness: 9/16" to 3/4" (thinner planking desirable from a weight standpoint).*
Total bottom planking thickness: 3/4".