

# Slither – Aluminum Bill of Materials

## (scroll down for plywood BOM)

ALUMINUM HULL MATERIAL LISTING: The following listing assumes the 17' version for the basic hull only, and does not consider options in powering, layout, etc. The listing is to serve as a general guide only for hull cost estimating purposes; do not use for buying materials without first checking the instructions and plans for various options (such as differences due to changes in overall boat length and powering methods which will vary each boat), 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. Thus the listing will vary and not all members are necessarily included - check the plans. Only marine alloy of the 5000- or 6000-series should be used. Common acceptable alloy designations include 5052, 5083, 5086, 5454, 5456, and 6061. For saltwater use, the 5086 is recommended except that extruded shapes can be 6000-series. While full-length hull plating panels can be formed by welding, single long panels are preferable to performing this procedure. In any case, the builder should check for plate or sheet size availability and plan the material utilization for minimum waste. While shorter members can always be butt welded to form long members, a doubler plate is usually advisable behind or on top of all such joints, lapping a considerable distance, and being welded all around. Members listed from extruded shapes (angles, channels, etc.) are to be structural grade or type.

MEMBERS	SIZE/TYPE	AMT RQD
Chine bars	1/2"	34'
Frames	2" x 1-1/2" angle 1-1/2" x 1-1/2" angle	30' 70'
Stiffeners (flat bar)	3/16" x 1-1/4"	120'
Rub rails	1" Sch. 40 pipe	40'
Keel	5/16" x 2"	8'

Stem	5/16" x 1' x 10'	1
Coamings	3/16" x 4" x 16'	2
Bottom plating	3/16" x 3' x 16'	2
Transom	3/16" x 3' x 7'	1
Side plating	1/8" x 3' x 18'	2
Decking (varies with version)	1/8"	50 sq. ft.

## Slither - 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. Thicknesses given below are nominal except as noted "net". Widths are net. Total lengths listed allow some overage for trimming, etc.

ITEM	SIZE	NO. PCS.
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**LUMBER:**

Framing	Random-random 1" nominal material with some widths to 7"	50 bd.ft.
Keel	1-1/2" NET x 5" NET	1 @ 7' (Jets) OR 9'
Bottom battens	1" x 2-1/2" 1" x 2-1/2"	2 @ 15' 2 @ 13'
Chine logs	3/4" NET x 1-3/4"	2 @ 17'(*)
Sheer clamps	1-1/2" NET x 1-1/4"	2 @ 19'(*)
Carlings	1" x 2"	2 @ 11'(*)
Coamings	1" x 5"	2 @ 12'
Spray rails	1" x 1-1/4"	2 @ 17'
Rub rails	1" x 1-1/4"	2 @ 19'
Deck battens	1" x 2" 1" x 3"	6 @ 6' 1 @ 7'

(\*) Partially laminated member; see instructions

**PLYWOOD:**

<b>ITEM</b>	<b>SIZE</b>	<b>NO. PCS.</b>
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Stem, breasthook, transom, floor timbers	3/4" x 4' x 8'	3
Frame gussets	3/8" x 4' x 8'	2
Bottom planking (17')	1/4" x 4' x 8'	8 OR
Bottom planking (18')	1/4" x 4' x 8'	9
Side planking (17')	3/8" x 4' x 8'	5 OR
Side planking (18')	3/8" x 4' x 8'	5
Decking	3/8" x 4' x 8'	3

**FASTENINGS:** Totals are sufficient for both 17' and 18' versions.

- **Screws:** Flathead wood type, bronze or hot dipped galvanized
- 1" #8 = 600
- 1 1/4" #8 = 500
- 1 1/2" #8 = 200
- 1 3/4" #10 = 100 (\*)
- 2" #10 = 40
- 3" #14 = 15
- (\*) 2" #10 screws may be substituted.

**Nails:** Ring type boat nails, bronze or Monel

- 1" #12 = 2 lbs.
- 1-1/4" #12 = 2 lbs.
- 1-1/2" #12 = 1 lb.

**Carriage Bolts:** Bronze or hot dipped galvanized complete with nuts and washers. Size per schedule; take lengths directly from work.

**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.