

## HOW TO BUILD A CARDBOARD BOAT



### Supplies required to build the boat:

1. A sharp cutting tool
2. Screen installing roller
3. 1 quart - of contact cement - (Gallon size shown)
4. 2 tubes of construction adhesive (like Liquid Nails) and a caulking gun
5. A roll of 1" masking tape
6. A roll of duct tape
7. Measuring tape
8. A long straight edge
9. An old table or saw horses to place card board on while working.
10. **Kilz** - exterior (or interior) oil base primer (Gallon size of interior **Kilz** shown)
11. You may use any latex enamel or spray paint for final coats (no multi-part paints allowed).
12. Paint brushes and rollers
13. Building square (optional)
14. Patching plaster (optional - Not shown)



To build this boat you need to get a piece of cardboard like the one shown on the left. These are used as dividers when products are shipped into the store and are free for the asking.

When you enter the store, go to the far left wall and walk all the way to the rear of the store. Ask if they have any of the thick cardboard (triple thickness) that is 8 1/2 feet long and 86" wide. The pieces are folded so they are 43" wide for carrying purposes. They are normally stacked to the left of the large overhead doors.



The fold (center) of the cardboard will be the bottom edge for one side of the boat. Now you must decide how wide you want the boat to be. It should be a minimum of 24" wide up to a max of 33" wide. The 33" wide still allows the side of the boat to be 10" tall. The sides can be anywhere from 8" to 12" high, but we have found from experience that 10" works very well.

Measure the width from the center fold and use a straight edge to mark the line. Now use the screen roller to roll along the straight edge and score the line by breaking through the first layer of cardboard.

Hold the straight edge against the scored line and bend the cardboard along the score line. Bend it so it is laying on the cardboard and then bring it back to 90 degrees.



Measure the other side so it is the same height as the side you just folded.



Mark it and use the straight edge to draw your line and as a guide when you cut it.



You need to cut four rectangular bulkhead braces; two for the rear transom, one for a center brace and one for a front brace. Measure the width and height of the inside of the boat with the two sides held up-right at 90 degrees to the bottom.

Here we have a scrap piece that was exactly the correct width.



Cutting the bulkhead pieces to fit.



Use an inexpensive paint brush to apply the contact cement to the sides of the two pieces that will be installed in the rear for the transom. You also need to apply contact cement to the bottom and side edges of each piece and to the bottom and sides of the boat where the braces will be installed.

**Hint:** Place the contact cement brush in a container of water. It will remain pliable as long as you keep it underwater. Just use a paper towel to wipe off the water when you want to use the brush. We've kept brushes pliable for over a month.

Follow the instructions on the contact cement can. After applying the cement, you must wait for the pieces to dry to the touch before joining them together. Hint: I like wearing rubber gloves when using contact cement and work in a well ventilated area.



Since this boat is 33" wide, we doubled up on the brace in the center as well as the rear.



We then used duct tape to hold the pieces together. Notice the tape goes all the way across the boat.



Once the braces are in, you can apply a bead of construction adhesive along the sides and the bottom of each piece. This provides additional strength and it seals the pieces from water.

You should also apply a bead along the edge of the boat that you bent. Remember you cut into the first layer, so the bead of construction adhesive will seal that as well.



Now for the front of the boat. We measured back 20" from the front of the boat and cut along the edge of the boat.



Use the screen roller to score the cardboard so you can bend the two sides of the boat that you cut free to form the bow of the boat.

Measure the center of the boat on the bottom piece and draw a line so you know where the center line is.



Bring the two sides together at the center and decide how much of a slope you want to the front.



Using a straight edge, mark a line on both sides where you want to cut. The line will go from the front down to the bottom where your bend meets the bottom of the boat.

Cut along this line on both sides.



Place your front bulkhead in and use the screen roller to score the cardboard where it will be bent to create the slope of the nose.

Hold the bulkhead in place and lift the nose piece so it bends along the scored line.



Hold the the two sides together so they meet at the center line you marked earlier. Hold the pieces together as you mark the bottom piece along the outside walls.

Once it is marked, cut along those marked lines.



Apply contact cement to all the surfaces to be joined, including the front bulkhead.



Once the contact cement is dry to the touch, first install the bulkhead and then join the bow pieces together. You can use duct tape to hold the pieces together.



Once again, use construction adhesive to seal and reinforce a the joints.



Now take the extra piece of cardboard and measure a piece to create a front deck for the bow of the boat.

If you want, you can create a deck the length of the boat and cutout holes for the paddlers. We just covered the front of the bow.

Here we are cutting the bow piece.

Remove the duct tape after the adhesive dries; the recommended wait is 24 hours.



Again, apply contact cement to all the joining surfaces and once the cement is dry to the touch, place them together. You can use duct tape to hold the pieces together.



You have open end pieces of the cardboard in the front, back and along the top edges.

You may use the construction adhesive to fill those open ends. Apply the adhesive and then use a scrap piece of cardboard to smooth it out. Because the adhesive dries so fast, you usually only have one or two swipes at it before it starts to dry.

Remove as much excess glue as possible so you have less sanding when it dries.



You may use masking tape to cover the edges and then paint over it. We use the construction adhesive to seal any open seams that will be under water and use the tape to cover the top edges.

Once you have sealed all the openings and seams, you need to apply a coat of oil based primer. We have found that the KILZ brand is an excellent choice. It covers well and it dries quickly. It is best to apply this with a roller to get an even coverage. One coat is all you need.

Any additional layers can be any latex enamel. We always try to find stores like ACE hardware on Cape Coral Parkway that has paint that was mixed and returned because of a

color mismatch. They make great filler coats. Usually two to three coats will be adequate.

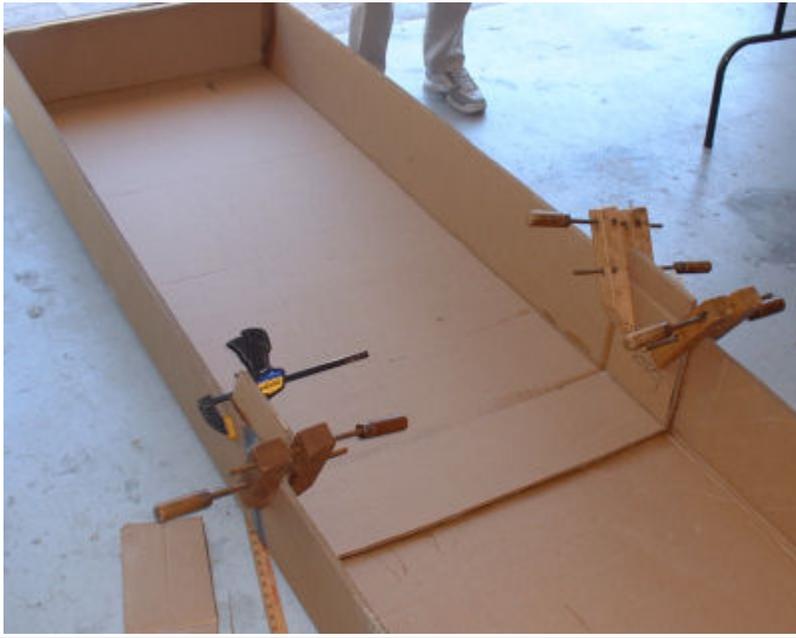


This is the completed boat, with a 33" width, ready to have the open ends filled or taped and then painted.

Let your imagination go rampant. Remember, you can use any material for decoration as long as it does not provide any floatation for the boat.



This is a boat built with a 24" width. Notice we used patching plaster to smooth out the edges after we filled them with construction adhesive. Normally it is better to use the patching plaster after you have applied the first coat of paint sealer.



If you want a longer boat, pick up two sheets of cardboard from Lowes. Bend the second sheet to match the first sheet. Butt them together and splice them as show using contact cement.

Use construction adhesive to seal the edges of the splice where it meets the bottom and sides. Also use the adhesive to seal the seam on the outside.