

Estimating epoxy amounts

This formula will help you estimate the amount of mixed epoxy needed to wet out fiberglass cloth (assuming a resin-to-fiber ratio of 50:50) and apply three rolled epoxy coats to fill the weave of the cloth, i.e. "fill coats."

The formula includes a waste factor of approximately 15%; however, more (or less) may be needed depending on the job and personal application technique. The epoxy is applied at standard room temperature, approximately 72° F.

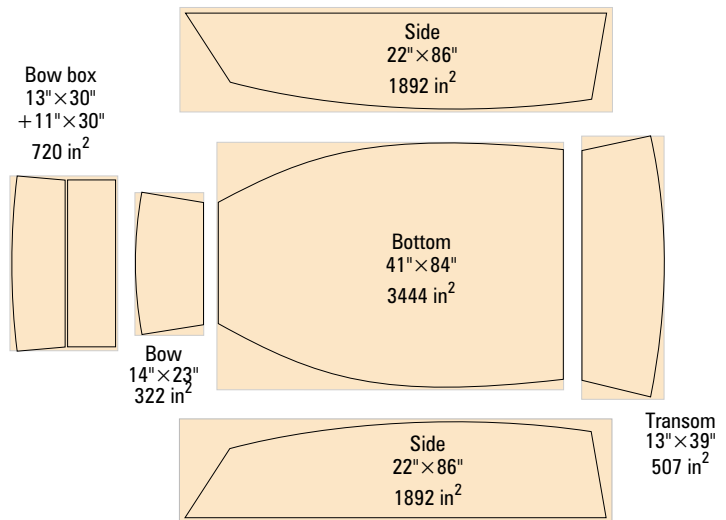
Gallons of mixed epoxy = $A \times [(W_f \times 0.00085) + 0.0075]$

Where:

A = Total area covered by fiberglass. Units are in square feet (ft²)

W_f = Total weight (W) per square yard of fiberglass (f) cloth used in laminate. Units are in ounces per square yard (oz/yd²), i.e. 6 oz fiberglass cloth weighs 6 oz/yd².

Let's use the Optimist pram in the previous article as an example:



The OUTSIDE of the pram is covered with 12 oz fabric and three fill coats.

Bow	322 in ²
Transom	507 in ²
Side x 2	3784 in ²
Bottom	3444 in ²
Total sq in	8057 in ²
	÷ 144
Total outside sq ft	56 ft ²

The INSIDE is covered with 6 oz fabric and three fill coats. The bow box is covered with 6 oz fabric on one side only.

Bow	322 in ²
Bow box	720 in ²
Transom	507 in ²
Side x 2	3784 in ²
Bottom	3444 in ²
Total sq in	8777 in ²
	÷ 144
Total inside sq ft	61 ft ²

Outside calculation

56 ft² [(12 oz/yd² × 0.00085) + 0.0075] = 0.99 gal

Inside calculation

61 ft² [(6 oz/yd² × 0.00085) + 0.0075] = 0.77 gal

Total 1.76 gal mixed epoxy

Note: a Group Size B resin and hardener makes 1.2 or 1.3 gal of mixed epoxy depending on hardener.