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× [(Wf×0.00085)+0.0075]

Where:

A=Total area covered by fiberglass. Units are in square feet (ft^2)

W_f =Total weight (W) per square yard of fiberglass ($_f$) cloth used in laminate. Units are in ounces per square yard (oz/yd^2), i.e. 6 oz fiberglass cloth weighs 6 oz/yd^2.

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

Bow: 322 in2	**Transom :** 507 in2	**Side×2:**3784 in2	**Bottom:**3444 in2	**Total sq in:** 8057 in2
	÷ 144		**Total outside sq ft:**	56 ft2

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 in2	**Bow box:** 720 in2	**Transom:**507 in2	**Side×2:**3784 in2	**Bottom:**3444 in2
Total sq in: 8777 in2	÷ 144		**Total inside sq ft:**	61 ft2

Outside calculation56 ft2 [(12 oz/yd2 × 0.00085) + 0.0075] = 0.99 gal

Inside calculation61 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.