

Calculating

by Laura Caiaccia

Exactly how much does your shop spend, each year, on glue? What about ATG? Screw eyes? Few picture framing retailers would be able to answer these questions off the top of their head. Some might be able to look at their accounting paperwork and make an educated guess. Only a handful would be able to confidently calculate the figure.

Fred Horton, CPF, could. He teaches a pricing seminar for the PFFA, an important part of which is showing participants how to calculate their costs for materials. Hand-outs for the class include spreadsheets that factor items such as the cost of glue used to join each frame, the cost of matcutter blades, even the price of wipes used to clean lites of glass.

Another one would might be Paul Miller, CPF, treasurer of the Evergreen Picture Framers Guild. He recently wrote a two-part article for the guild's newsletter explaining how he determined his retail price for dry mounting. (If you don't think you can fill two articles when you're writing about pricing dry mounting services, read his article and you'll change your mind.) Originally inspired to recalculate his dry mounting prices and write the article because his price is so much higher than certain averages from a national survey, he concludes in the end that some framers' retail prices for dry mounting are only \$0.03 more per united inch than he pays, wholesale,

for dry mounting tissue.

Of course, knowing if your business used either 3,000 screw eyes last year or 3,011 is of limited usefulness. But knowing your costs for materials, and being able to incorporate them into your retail prices, is far from trivial.

Calculating your costs of materials isn't easy. After all, there are so many materials used in a single frame

Determining Your True Cost And Retail Price for Materials (the example given here is for dry mount tissue)

Determining Cost Per Lineal Inch:

Distributor's Price (Base Cost)	\$0.095	100%
Waste	\$0.020	21.2%
Shipping	\$0.009	10%
Warehousing	\$0.005	5%
Total (Add all of the Above)	\$0.129	136.2%

Determining Retail Price Per United Inch:

True Cost Per Lineal Inch	\$0.13
Number of United Inches in Job	54
Number of Lineal Inches Needed for Job	32" (of 24" wide tissue)
Multiply Number of Lineal Inches Needed for Job by Cost Per Lineal Inch (32x.13)	\$4.16
Divide Above Total by Number of United Inches in Job(4.16/54)	\$0.077
Multiply Above Total by Retail Markup (In this case 3.33) to get Retail Price per UI	\$0.257
Total (Retail Price per UI Multiplied by Total Number of UI in Job, or .257x54))	\$13.85

Material Costs

that attempting to list them is difficult enough. What's more, they're usually not easily measured. Moulding can be priced based on the number of feet used in the frame; matboard can be measured in united inches. But glue? How would you measure glue? Yet the difficulty of this task doesn't diminish its importance. It's a mistake to assume, as some retailers do, that the true cost for a roll of ATG, a bottle of French matting ink or powders, or a box of dry mounting tissue is equal to the price the distributor charges for it. There's shipping, waste, and warehousing to consider—and that's just for starters. Failing to calculate these costs into your prices means that they're coming out of your profits.

The first thing to do, according to Horton, is to inventory all of the materials in your back room. It's going to take some time to do, but everything stocked in the back room should be written down on a list. Step two is to group the items by the job or service they're used for. Nails (traditional or for an underpinner) or plastic inserts, glue, and putty, for example, would all be grouped under frame joining. Brads, backing paper, ATG, screw eyes, wire, and bumpers would all be grouped under frame finishing. Matting would include materials such as ATG, inks, powders, decorative tapes or papers, and matcutter blades.

The next step is to determine your cost for each of those materials. Ask yourself: How much do you pay for a box of ATG? How many rolls are in the box? If you divide the cost of the entire box by the number of rolls in the box, how much does each roll cost? This is how you will determine your per unit costs. To use ATG as an example: if the box costs \$210 and contains 70 rolls, that's \$3 per roll. If each roll contains 36 yards of tape, then that's about \$0.08 per yard.

Next, says Horton, determine how much of each

item is used to make a single frame. While some numbers will vary—it obviously takes more ATG to adhere a triple mat than a double mat—all that's important is that an average is calculated. Other materials will be easier to calculate because their quantity remains constant from frame to frame: you only put one shop label on the dust cover of each frame, for example. To return to the ATG example, if you used 2 yards of ATG per frame, then your ATG cost per frame would be about \$0.16. (Because we've already calculated that each yard costs \$0.08.)

Another way to calculate the same figure would be to ask yourself how many frames you could complete with a given unit. You'd then divide the cost per unit by the number of frames you could complete with a single unit. Your ATG calculation would then be as follows. If you completed 18 frames with one roll of ATG tape, then you'd divide the cost for the roll (\$3) by the number of frames completed (18) and again get \$0.16.

Once you're done, you'll be able to determine how much individual jobs and services, such as a double mat with a color panel, costs you. In this example, you'd add the cost of the matboards, the ATG tape, the matcutter blades, the colored pigments for the panel, the tape used to mask the panel, and the cost for your labor, of course, to get your total. Now you know how much it costs you to create a double french mat, and can determine how much it should cost your customer by settling on an appropriate markup.

But let's go back to the cost of the ATG. If you really did pay your distributor \$210 for that box, does that price reflect your true cost for the tape? Probably not, although assuming it does is a mistake many retailers make, according to Miller. Costs such as shipping need to be added, as well as factors such as waste (like when a

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new employee loads the dispenser incorrectly and uses up a few yards of tape in the process) and warehousing. Only when all of these elements are considered can you arrive at your true cost for ATG—or any other material you order.

In Miller's article for the April and May 1998 issues of Evergreen Picture Framers Guild newsletter, he analyzes his costs and retail price for dry mounting services which includes dry mount tissue, substrate, and labor.

His analysis begins with his calculation for his true cost of dry mount tissue. He writes, "The true cost of the dry mount tissue is based on: 1. Base cost of a roll of tissue from a distributor [for his article he averages the base cost between 24" and 40" roll pieces]... 2. Wastage of the tissue... 3. The freight in... 4. Usage (or warehousing)..."

And how are all of these factors added up into one price? Miller calculates his wastage, freight, and usage as percentages of the base price. For example, he lists his base price for dry mount tissue (the price, on average, his pays his distributor for it) at \$0.095 per lineal inch.

He calculates his waste to be between 17% and 18%. This means that only about 82.5% of the tissue is being utilized. "One important thing to remember," Miller says, "is that retailers have to compensate for wasted material not just in terms of the price they paid for it, but the money they could have made if they had been able to use the material for a customer's work." This is why, even though his waste is 17.5%, he marks up his tissue by 21.2% to compensate.

Shipping costs can vary, so it may be useful to determine an average over a period of time. Miller calculates his shipping costs are 10% of his total costs for dry mount tissue. He also averaged the time it takes him between reorders of a single roll of a particular tissue and arrived at one annual turn (meaning his average time

between reorders is 12 months). Of course, the value of the roll of tissue declines throughout the year (since there is less tissue on it), but instead of calculating that, Miller simply uses a single figure of 5%.

The percentages for waste, freight, and usage together add up to 36.2%. This means that Miller's true cost for dry mount tissue is 36.2% higher than the price he pays his distributor for it (\$0.095). Since 36.2% of \$0.095 equals .034, Miller adds \$0.095 and \$0.034 to arrive at \$0.129 as his true cost per lineal inch, which he rounds up to \$0.13.

Your true cost is based on your distributor's price, waste, shipping, and warehousing.

Since he calculates his framing jobs in united inches, however, he converts his calculations by determining that, for a 22" x 32" poster, he would require 32 lineal inches of 24" wide dry mount tissue, or 54 united inches of tissue. He multiplies the number of lineal inches (32) by his cost per lineal inch (\$0.13). This equals \$4.16. He then divides this by the number of total united inches (54) to get his cost, per united inch, for this job: \$0.077. With a retail

markup of 3.33, his retail price would be \$0.257.

This is not Miller's retail price for dry mounting services—it is the price for the tissue alone. His retail price for dry mounting is a total of the price for the tissue, substrate, and labor. While the price for the tissue alone might seem like only an insignificant fraction of the total cost, this is misleading.

Think of it this way: if Miller had calculated his distributor's price for a roll of tissue instead of his true cost, he would have ended up with a total of \$0.056 instead of \$0.077 per united inch. This would have made his retail price just \$0.186 instead of \$0.257. That's a difference of 138%.

Think of a figure that size cutting into your profits and you'll get an idea of how important determining the true cost of your materials really is. ■