

TECHNICAL BULLETIN

Volume Solids

All paints are not created equal: The truth about volume solids

Higher quality paint formulas start with optimal amounts of quality raw materials (pigments, binders and additives). Using higher quality raw materials increases the price per gallon of the paint, but the performance advantages will far outweigh these costs.

Each company's definition of their "premium" grade of paint is subjective. **An objective indicator of performance is the volume solids percentage.** It provides insight about the amount of actual resins and pigments in the formula (i.e., the ingredients that adhere to the wall to create the paint finish). A higher percentage means more ingredients. To find this percentage, look at the Technical Data sheet or Product Information sheet supplied by the manufacturer. A top quality latex paint will have between 35% and 45% volume solids. Economy paints have less than 30% volume solids.

A higher quality paint may prove to be the better value in the long run. For example, Paint A's cost per gallon may be higher but Paint B's inferior coverage requires more gallons to be purchased. Second, the labor to apply more gallons will result in higher costs. Labor is the most expensive element on the job and typically accounts for 90% of the overall project cost. Third, the touch-up capability of a higher quality paint again makes Paint A the better value. Finally, a more durable paint will result in having to paint less often, which will save on labor.

Tool to calculate square foot coverage & cost per square foot

You can demonstrate that a higher quality paint with superior coverage is the better value by using the chart. It tells you how much square foot coverage you'll get with a paint that has the following volume solids percentage (based on 1.5 mils dry film thickness):

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The formula used to arrive at the numbers in the chart below is:

$$\frac{1600 \text{ sq ft per gal} \times \text{Volume Solids \%}}{1.5 \text{ mils dry film thickness}}$$

Volume Solids (%)	Sq. ft. /gal
28	299
29	309
30	320
31	331
32	341
33	352
34	363
35	373
36	384
37	395
38	405
39	416
40	427
41	437
42	448

If you have a 5,000 sq. ft. job, for example, it would take 17 gallons if you used a paint with 28% volume solids (5,000 sq. ft. divided by 299 sq. ft.) versus 11 gallons if you used a paint with 42% volume solids (5,000 sq. ft. divided by 448 sq. ft.). If the lower volume solids paint cost \$29 per gallon, it would cost \$493 for the paint plus the additional cost in labor to apply it. In contrast, at \$35 for the higher volume solids paint, it would only cost \$385 for the paint and you would save in labor costs. This example demonstrates how buying the higher quality paint at the higher price per gallon may actually be less expensive on the whole.

Keep in mind:

- Paints are formulated for a specific application and intended use. Contractors should talk with the paint manufacturer's sales representatives to discuss their needs to be assured of the best results.
- A painting contractor should understand his customer's expectations and desires. A premium quality paint that allows him to complete a job with less paint in less time and that results in a more pleasing finish, will improve his chances of getting the call for that next project.



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