

Required Wet Film Thickness (WFT) Reference Charts

for determining the wet film thickness required to achieve common dry film thickness (DFT) targets based on coating solids by volume. Includes guidance for both as-supplied and reduced coatings, with formulas and practical examples for use during application.

Formula 1: Coating Applied As-Supplied (No Reducer)

When the coating is applied straight from the container with no thinning:

$$WFT = DFT \div (SV / 100)$$

Where:

- WFT = wet film thickness
- DFT = desired dry film thickness
- SV = solids by volume (%) of the coating as supplied

Example:

Target DFT = 100 µm, Solids by volume = 60%

WFT = 100 ÷ (60/100)

WFT = 100 ÷ 0.60 = 167 µm

Formula 2: Reduced Coating (With Reducer Added)

Adding thinner/reducer increases liquid volume but typically adds no solids. The mixed material has a lower effective solids by volume, so you need a higher WFT to reach the same DFT.

$$WFT = DFT \times (1 + t) / (SV / 100)$$

Where:

- t = fraction of thinner added relative to coating volume
(Example: 10% thinner = 0.10)

Example:

Target DFT = 100 µm, Solids by volume = 60%, 10% reducer added

WFT = 100 × (1 + 0.10) ÷ (60/100)

WFT = 100 × 1.10 ÷ 0.60 = 183 µm

Required WFT for a 75 µm (3 mil) DFT Target

Solids by Volume (%)	WFT Required (No Reducer)	WFT Required (10% Reducer)
40%	188 µm (7.5 mils)	206 µm (8.3 mils)
50%	150 µm (6.0 mils)	165 µm (6.6 mils)
60%	125 µm (5.0 mils)	138 µm (5.5 mils)
70%	107 µm (4.3 mils)	118 µm (4.7 mils)
80%	94 µm (3.8 mils)	103 µm (4.1 mils)

Thin coatings are especially sensitive to over-thinning. Small WFT errors can result in large DFT losses.

Required WFT for a 100 µm (4 mil) DFT Target

Solids by Volume (%)	WFT Required (No Reducer)	WFT Required (10% Reducer)
40%	250 µm (10.0 mils)	275 µm (11.0 mils)
50%	200 µm (8.0 mils)	220 µm (8.8 mils)
60%	167 µm (6.7 mils)	183 µm (7.3 mils)
70%	143 µm (5.7 mils)	157 µm (6.3 mils)
80%	125 µm (5.0 mils)	138 µm (5.5 mils)

Required WFT for a 125 µm (5 mil) DFT Target

Solids by Volume (%)	WFT Required (No Reducer)	WFT Required (10% Reducer)
40%	313 µm (12.5 mils)	344 µm (13.8 mils)
50%	250 µm (10.0 mils)	275 µm (11.0 mils)
60%	208 µm (8.3 mils)	229 µm (9.2 mils)
70%	179 µm (7.1 mils)	196 µm (7.9 mils)
80%	156 µm (6.3 mils)	172 µm (6.9 mils)



Always verify final dry film thickness after cure