

# STRUCTURAL ENGINEERING AND INSPECTIONS, INC. S E I

## Technical Bulletin 09-009

### *Stucco Thickness and Cracking*

The cracking in your exterior cement-based plaster (stucco) over the frame sections of your home may be caused by improper installation. Specifically, the stucco thickness may be inadequate.



ASTM C926 requires stucco with metal plaster base (lath) over solid base (Frame) to be 3-coat 7/8" thick (Total).

**TABLE 1 Nominal<sup>A</sup> Plaster Thickness for Three- and Two-Coat Work,<sup>B</sup> in. (mm)**

Base	Vertical <sup>C</sup>				Horizontal			
	1st Coat	2nd Coat	3rd Coat <sup>D</sup>	Total	1st Coat	2nd Coat	3rd Coat <sup>D</sup>	Total
Exterior								
Three-coat work: <sup>E</sup>								
Metal plaster base	3/8 (9.5)	3/8 (9.5)	1/8 (3)	7/8 (22)	1/4 (6)	1/4 (6)	1/8 (3)	5/8 (16)
Solid plaster base: <sup>F</sup>					Use two-coat work			
Unit masonry	1/4 (6)	1/4 (6)	1/8 (3)	5/8 (16)				3/8 (9.5) max
Cast-in-place or pre-cast concrete	1/4 (6)	1/4 (6)	1/8 (3) <sup>G,H</sup>	5/8 (16)				3/8 (9.5) max
Metal plaster over solid base	1/2 (12.5)	1/4 (6)	1/8 (3)	7/8 (22)	1/2 (12.5)	1/4 (6)	1/4 (6)	7/8 (22)
Two-coat work: <sup>I</sup>								
Solid plaster base: <sup>F</sup>								
Unit masonry	3/8 (9.5)	1/8 (3)		1/2 (12.5) <sup>J</sup>				3/8 (9.5) max
Cast-in-place pre-cast	1/4 (6)	1/8 (3)		3/8 (9.5)				3/8 (9.5) max

<sup>A</sup> Table 1 shows only the first and finish coats for vertical surfaces and only the total thickness on horizontal surfaces for two-coat work.  
<sup>B</sup> Nominal thickness: 1st coat—3/8 in. (9.5 mm); 1st and 2nd coats—total 3/4 in. (9.0 mm); 1st, 2nd, and finish coats—7/8 in. (22.2 mm).  
<sup>C</sup> Where a fire rating is required, plaster thickness shall conform to the applicable building code or to an approved test assembly.

### ASTM C926\*- Installation of Portland Cement-Based Plaster (Stucco).<sup>1</sup>

\*Note: ASTM C926 is the Building Code referenced standard for the installation of Portland Cement-Based Plaster (Stucco).

Additionally, Per ASTM C926 the thickness of the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> coat of stucco over frame should be 1/2 inch, 1/4 inch and 1/8 inch respectively.

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See picture below for an example of stucco total thickness less than 7/8".



See picture below for an example of stucco 2<sup>nd</sup> plus 3<sup>rd</sup> coat thickness less than 3/8".



Call Structural Engineering and Inspections, Inc., if you suspect that exterior cracking may be the result of improper stucco installation.

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