

2109.3.2 Stabilized adobe.

2109.3.2.1 Material requirements. Stabilized adobe shall comply with the material requirements of unstabilized adobe in addition to Sections 2109.3.2.1.1 and 2109.3.2.1.2.

2109.3.2.1.1 Soil requirements. Soil used for stabilized adobe units shall be chemically compatible with the stabilizing material.

2109.3.2.1.2 Absorption requirements. A 4-inch (102 mm) cube, cut from a stabilized adobe unit dried to a constant weight in a ventilated oven at 212°F to 239°F (100°C to 115°C), shall not absorb more than 2¹/₂ percent moisture by weight when placed upon a constantly water-saturated, porous surface for seven days. A minimum of five specimens shall be tested and each specimen shall be cut from a separate unit.

2109.3.3 Allowable stress. The allowable compressive stress based on gross cross-sectional area of adobe shall not exceed 30 psi (207 kPa).

2109.3.3.1 Bolts. Bolt values shall not exceed those set forth in Table 2109.3.3.1.

TABLE 2109.3.3.1 ALLOWABLE SHEAR ON BOLTS IN ADOBE MASONRY

DIAMETER OF BOLTS (inches)	MINIMUM EMBEDMENT (inches)	SHEAR (pounds)
¹ / ₂	-	-
⁵ / ₈	12	200
³ / ₄	15	300
⁷ / ₈	18	400
1	21	500
1 ¹ / ₈	24	600

For SI: 1 inch = 25.4 mm, 1 pound = 4.448 N.

2109.3.4 Construction.

2109.3.4.1 General. Adobe construction shall be limited as stated in Sections 2109.3.4.1.1 through 2109.3.4.1.4.

2109.3.4.1.1 Height restrictions. Adobe construction shall be limited to buildings not exceeding one *story*, except that two-*story* construction is allowed when designed by a *registered design professional*.

2109.3.4.1.2 Mortar restrictions. Mortar for stabilized adobe units shall comply with Chapter 21 or adobe soil. Adobe soil used as mortar shall comply with material requirements for stabilized adobe. Mortar for unstabilized adobe shall be portland cement mortar.