**2109.3.1.1 Compressive strength.** Adobe units shall have an average compressive strength of 300 psi (2068 kPa) when tested in accordance with ASTM C 67. Five samples shall be tested and no individual unit is permitted to have a compressive strength of less than 250 psi (1724 kPa).

**2109.3.1.2 Modulus of rupture.** Adobe units shall have an average modulus of rupture of 50 psi (345 kPa) when tested in accordance with the following procedure. Five samples shall be tested and no individual unit shall have a modulus of rupture of less than 35 psi (241 kPa).

**2109.3.1.2.1 Support conditions.** A cured unit shall be simply supported by 2-inch-diameter (51 mm) cylindrical supports located 2 inches (51 mm) in from each end and extending the full width of the unit.

**2109.3.1.2.2 Loading conditions.** A 2-inch-diameter (51 mm) cylinder shall be placed at midspan parallel to the supports.

**2109.3.1.2.3 Testing procedure.** A vertical load shall be applied to the cylinder at the rate of 500 pounds per minute (37 N/s) until failure occurs.

**2109.3.1.2.4 Modulus of rupture determination.** The modulus of rupture shall be determined by the equation:

$$f_{\rm r} = 3 P L_{\rm s} / 2 S_{\rm w} (S_{\rm t}^2)$$
 (Equation 21-2)

where, for the purposes of this section only:

 $S_{\rm w}$  = Width of the test specimen measured parallel to the loading cylinder, inches (mm).

 $f_r = Modulus of rupture, psi (MPa).$ 

 $L_s$  = Distance between supports, inches (mm).

 $S_t$  = Thickness of the test specimen measured parallel to the direction of load, inches (mm).

P =The applied load at failure, pounds (N).

**2109.3.1.3 Moisture content requirements.** Adobe units shall have a moisture content not exceeding 4 percent by weight.

**2109.3.1.4 Shrinkage cracks.** Adobe units shall not contain more than three shrinkage cracks and any single shrinkage crack shall not exceed 3 inches (76 mm) in length or  $^{1}/_{8}$  inch (3.2 mm) in width.