

Concrete Screw Engineering Data

Pittsburgh Testing Laboratory tested the 1/4" concrete screws for both pull-out and shear in two grades of structural concrete using 2-3/4" long screws embedded to a depth of 1" in a 3/16" drilled hole. Tests for pull-out and shear were repeated three times for both concrete grades. Test values for other materials will be different.

	Pull-out Loads (lbs.)		Shear Load (lbs.)	
Concrete Strength:	3000 psi	4000 psi	3000 psi	4000 psi
Test 1	1,445	1,690	1,610	1,420
Test 2	1,510	1,645	1,545	1,585
Test 3	1,490	1,665	1,550	1,525

Independent testing of the 3/16" masonry screws was performed in a similar manner in 3,725 psi hard rock concrete. The pull-out values shown below are the average for ten tests:

Embedment:	1 in.	1-1/4 in.	1-1/2 in.	1-3/4 in.
Pull-out Load (lbs.):	1,030	1,315	1,450	1,834