

C.18 CONCRETE MIX DESIGN

A healthy respect for the properties of the concrete you place in your PolySteel walls will go a long way towards ensuring a successful project. The design of the concrete mix must comply with all applicable codes, and the engineering requirements of your project. The product delivered to your job site should meet the specifications necessary to achieve the design strength and assist proper placement, and the tools and equipment used to place the concrete is critical to achieving good consolidation of the mix. As you might expect, it is far easier to properly plan and execute the placement of concrete into your PolySteel walls than to drill, cut, chip, or saw away at hardened concrete cured in a wall that requires corrections or modifications. Respect your material, and you will leave a legacy you can be proud of.

The Design Tables in this Manual are based a concrete mix of 2,500 psi at 28 days. While your project may require or utilize a greater design strength than this, you will find that a 2,500 psi mix will be sufficient for most PolySteel projects. This mix should include a 3/8" to 1/2" aggregate and should arrive at your job site with a 5" slump. **Do not use a thin, watery mix.** It will result in reduced concrete strength and can increase the likelihood of concrete spills, ruptures, and floating of forms. You should be prepared to refuse concrete delivered to your job that is outside of the specifications of the concrete mix design ordered.

- ✓ For specific guidelines on how to achieve the mix desired, or on the effects of adding water to the mix, refer to Section D.13 in the Tips and Techniques section of this Manual.
- ✓ PolySteel provides an excellent curing environment for concrete that utilizes fly ash as a partial substitute for cement in the mix. The use of fly ash is recommended for the benefit of our environment, the smooth flow of concrete into your walls, and reduced concrete costs.
- ✓ Consult the Estimating Basic Materials Worksheet in the Getting Started section of the Manual for the proper volume of concrete to order for your project.
- ✓ It is recommended that you test each load of concrete delivered to your project for the proper slump, using the slump cone method outlined in the Tips & Techniques section of this Manual (Section D.14)
- ✓ Do not allow the addition of any water to your concrete without your approval.



PLACE CONCRETE
IN CONE



ROD AS REQUIRED



MEASURE SLUMP