

ACI Mix Design Example #3

Consider the following example: The 28-day compressive strength should be 6,000 psi. The slump should be between 3 and 4 in. The maximum aggregate size should not exceed 1 in. The coarse and fine aggregates in the storage bins are wet. This application will be in a moderate exposure environment.

The properties of the materials are as follows:

- Cement : Type I, specific gravity = 3.15
- Coarse Aggregate: Bulk specific gravity (SSD) = 2.65; absorption capacity = 0.5%;
dry-rodded unit weight = 96 lb./ft.³
surface moisture = 0.5%
- Fine Aggregate: Bulk specific gravity (SSD) = 2.60; absorption capacity = 1.1%;
fineness modulus = 2.70;
surface moisture = 2.0%