

ACI Mix Design Example #1

Consider the following example: The 28-day compressive strength should be 4,000 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.

The properties of the materials are as follows:

- Cement : Type I, specific gravity = 3.15
- Coarse Aggregate: Bulk specific gravity (SSD) = 2.70; absorption capacity = 1.1%; dry-rodded unit weight = 105 lb./ft.³
surface moisture = 1%
- Fine Aggregate: Bulk specific gravity (SSD) = 2.67; absorption capacity = 1.3%; fineness modulus = 2.70;
surface moisture = 1.5%