IN-LB Inch-Pound Units

Selecting Proportions for Normal-Density and High-Density Concrete—Guide

Reported by ACI Committee 211

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Selecting Proportions for Normal-Density and High-Density Concrete—Guide

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This guide to concrete proportioning provides background information on, and a procedure for, selecting and adjusting concrete mixture proportions. It applies to normal-density concrete, both with and without chemical admixtures, supplementary cementitious materials, or both. The procedure uses calculations based on the absolute volumes occupied by the mixture constituents. The procedure incorporates consideration of requirements for aggregate gradation, workability, strength, and durability. Example calculations are provided, including adjustments based on the results of the first trial batch. Appendixes cover laboratory tests and proportioning of high-density concretes.

Keywords: absolute volume; admixtures; air content; durability; mixture proportioning; supplementary cementitious materials; trial batching; water-cementitious materials ratio (*w*/*cm*); workability; yield.

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