IN-LB	Inch-Pound Units
SI	International System of Units

Guide for Structural Lightweight-Aggregate Concrete

Reported by ACI Committee 213

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Special thanks to the following associate members for their contribution to the revision of this document: Reid W. Castrodale, and W. Jason Weiss. The committee would also like to thank the late William X. Sy[illegible]ner for his contribution to revision of the guide.

The guide summarizes the present state of technology, presents and interprets the data on lightweight-aggregate concrete from many laboratory studies and the accumulated experience resulting from its successful use, and reviews performance of structural lightweight aggregate concrete in service.

This guide includes a definition of lightweight aggregate concrete for structural purposes and discusses, in a condensed fashion, the production methods for and inherent properties of structural lightweight aggregates. Current practices for proportioning, mixing, transporting, and placing; properties of hardened concrete; and the design of structural concrete with reference to ACI 318 are all discussed.

Keywords: abrasion resistance; aggregate; bond; contact zone; durability; fire resistance; internal curing; lightweight aggregate; lightweight concrete; mixture proportion; shear; shrinkage; specified density concrete; strength; thermal conductivity.

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