

ACI 306R-16

Guide to Cold Weather Concreting

Reported by ACI Committee 306



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Guide to Cold Weather Concreting

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This document guides specifiers, contractors, and concrete producers through the selection processes that identify methods for cold weather concreting. The objectives of cold weather concreting practices are to: a) prevent damage to concrete due to freezing at early ages; b) ensure that the concrete develops the recommended strength for safe removal of forms; c) maintain curing conditions that foster normal strength development; d) limit rapid temperature changes; and e) provide protection consistent with intended serviceability of the structure. Concrete placed during cold weather will develop sufficient strength and durability to satisfy intended service requirements when it is properly proportioned, produced, placed, and protected.

Keywords: accelerating admixtures; antifreeze admixtures; cold weather concreting; concrete temperature; curing; enclosures; form removal; freezing and thawing; heaters; heating aggregates; insulating materials; maturity testing; protection; strength development.

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