

Committee on Concrete and Concrete Aggregates Approves New Slump Flow and Admixture Standards

ASTM INTERNATIONAL COMMITTEE C09 on Concrete and Concrete Aggregates has recently approved two new standards: C 1611, Test Method for Slump Flow of Self-Consolidating Concrete; and C 1622, Specification for Cold-Weather Admixture Systems. Descriptions of both new standards follow.

C 1611 — TEST METHOD FOR SLUMP FLOW OF SELF-CONSOLIDATING CONCRETE

The concrete industry has been using self-consolidating concrete for the past several years. A new ASTM International standard developed by Committee C09 on Concrete and Concrete Aggregates, C 1611, Test Method for Slump Flow of Self-Consolidating Concrete, will allow users to measure the consistency of self-consolidating concrete for the first time.

“Because of its high fluidity, the consistency of fresh self-consolidating concrete could not be quantified using existing ASTM methods, since significant consistency variations cannot be detected using those methods,” says Martin Vachon, director of technology, Axim-Italcementi Group. However, the new standard, which is under the jurisdiction of Subcommittee C09.47 on Self-Consolidating Concrete, will provide self-consolidating concrete users with a means to measure consistency. “The standard will be used to develop mix designs, control the quality and production consistency and establish specifications for self-consolidating concrete,” says Vachon.

Vachon also notes that some of the ideas that went into the development of Test Method C 1611 came out of the September 2004 Ibero American

Concrete Meeting, held in Colombia. Self-consolidating concrete was an important topic at the South American meeting, which attracted concrete ready mix producers from around the world.

ASTM standards are available from Customer Service (phone: 610/832-9585; service@astm.org) or www.astm.org.

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Upcoming Meeting: Dec. 4-7
December Committee Week,
Dallas, Texas

C 1622 — SPECIFICATION FOR COLD-WEATHER ADMIXTURE SYSTEMS

Because concrete can freeze before it hardens it is a difficult construction material to use in cold weather. However, a new ASTM standard, which is the result of a project to prove that antifreeze technology for concrete is feasible, will allow for greater use of concrete during construction in cold weather.

ASTM Committee C09 on Concrete and Concrete Aggregates has approved the new standard, C 1622, Specification for Cold-Weather Admixture Systems. The specification, which is under the jurisdiction of Subcommittee C09.23 on Chemical Admixtures, covers cold-weather admixture systems to be added to hydraulic-cement concrete when the temperature of the concrete could be as low as 23°F (-50°C).

Charles Korhonen, of the U.S. Army Engineering Research and Development Center/Cold Regions Research and Engineering Laboratory, notes both the time- and money-saving advantages of C 1622. “The bene-



fits of cold-weather admixture systems are that the concrete construction season can be extended by 60 to 120 days in cold-weather areas and, because less thermal protection is required, the final in-place cost of concrete should be one-third less than when conventional cold weather concreting techniques are used,” says Korhonen.

Korhonen says that the standard is based on the idea that off-the-shelf admixtures can be used as antifreeze if they are combined in special ways and in high enough quantities.

ASTM standards are available for purchase from Customer Service (phone: 610/832-9585; service@astm.org) or www.astm.org.

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