A3000-13

Cementitious materials compendium

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Cementitious materials compendium

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Preface

This is the fourth edition of the CSA A3000, *Cementitious materials compendium*. It supersedes the previous editions published in 2008, 2003, and 1998.

Significant changes from the previous edition include the following:

(a) ASTM reference publications have been updated to reflect current ASTM format.
(b) The definition of "blended hydraulic cement" has been changed to "a single manufactured product".
(c) The Clause 5.2.2 example has been modified for clarity.
(d) Note 3 of Table 9 in A3000 has been modified to include guidance on the 18 month test period where it is recommended that SCM replacements higher than the identified minimums should also be tested.
(e) Addition of a new Annex D to provide additional informative information on sustainable development and the cement industry.
(f) The air content in Table 1 of A3002 has been changed for type N from 22 to 21 and for type S from 20 to 19 to harmonize with ASTM C91.
(g) Further clarification has been added to Clause 12.9.1 of A3003 to note that the C3A is calculated in Portland cement.
(h) Additional information has been added to Clause 3 of A3004-C8 to specify that mortar bars need to be stored in a sulphate solution for up to one year for Procedure A and up to two years for Procedure B.
(i) Where possible, changes have also been made for the purpose of harmonization with ASTM specifications.
(j) A3004-B8 has been added an an alternative test method for determination of heat of hydration by isothermal conduction calorimetry.
(k) A number of minor editorial changes have also been completed to offer additional clarity to the user.
(l) Reference publications have been updated to reflect current editions.

CSA Group gratefully acknowledges the following funding stakeholders and the industry association for their contribution to the development of A3000: Lafarge Canada Inc., Ciment Québec Inc., Holcim (Canada) Inc., ESSROC, Italcementi Group, St. Marys Cement Group, Lehigh Hanson, Colacem Canada Inc., Federal White, and Cement Association of Canada.

These Standards were prepared by the Technical Committee on Hydraulic Cement and Supplementary Cementing Materials, under the jurisdiction of the Strategic Steering Committee on Concrete and Related Products, and have been formally approved by the Technical Committee.

Notes:

(1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*

(2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*

(3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*

(4) *To submit a request for interpretation of this Standard, please send the following information to* ***inquiries@csagroup.org*** *and include "Request for interpretation" in the subject line:*
(a) define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;
(b) provide an explanation of circumstances surrounding the actual field condition; and
(c) where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.
Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at* ***standardsactivities.csa.ca****.*

(5) *This Standard is subject to review five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to* ***inquiries@csagroup.org*** *and include "Proposal for change" in the subject line:*
(a) Standard designation (number);
(b) relevant clause, table, and/or figure number;
(c) wording of the proposed change; and
(d) rationale for the change.

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Cementitious materials for use in concrete

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A3001-13
Cementitious materials for use in concrete

1 Scope

1.1
This Standard addresses the following aspects of cementitious materials:
(a) their definitions;
(b) their chemical, physical, and uniformity requirements;
(c) the tests required;
(d) the procedures for inspection and sampling; and
(e) the units of measurement, packaging, marking, and storage.

1.2
The cementitious materials for use in concrete are classified as follows in this Standard:
(a) portland cement;
(b) blended hydraulic cement;
(c) portland-limestone cement;
(d) supplementary cementing materials; and
(e) blended supplementary cementing materials.

1.3
In CSA Standards, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; "should" is used to express a recommendation or that which is advised but not required; "may" is used to express an option or that which is permissible within the limits of the standard; and "can" is used to express possibility or capability.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

1.4
Values are given in SI (metric) units. The values given in parentheses are for information only.

2 Reference publications
This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below, including all amendments published thereto.

CSA Group
A23.1-09/A23.2-09
Concrete materials and methods of concrete construction/Test methods and standard practices for concrete