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CSA A23.1:24/CSA A23.2:24

National Standard of Canada

Concrete materials and methods of concrete construction/Test Methods and Standard Practices for concrete

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This edition of CSA A23.1/CSA A23.2 is dedicated to the memory of Vice-Chair Dr. Michael Thomas (Department of Civil Engineering, University of New Brunswick), who has made significant contributions to the development of several editions of CSA A23.1/CSA A23.2. Sadly, Dr. Thomas passed away in December of 2022 prior to the final ballot for this edition.

Preface

This is the fourteenth edition of the combined CSA A23.1/CSA A23.2, *Concrete materials and methods of concrete construction/Test Methods and Standard Practices for concrete*. These Standards are part of the CSA A23 series on concrete and supersede the previous editions published in 2019, 2014, 2009, 2004, 2000, 1994, 1990, 1977, 1973, 1967, 1960, 1942, and 1929.

There have been many technical, editorial, and formatting changes throughout this edition; the most significant technical changes are the following:

a) Clause 1.3.2: list of eligible precast elements reduced to align with CSA A23.3;
b) Clause 4: relocation of Clauses on combined aggregate uniformity from the test methods;
c) Clause 4.3.2.3.1: removal of reference to ASTM C1362 (withdrawn) for slump flow;
d) Clause 4, Table 12, Annex O, CSA A23.2-15A, and CSA A23.2-27A: updated for usage of recycled concrete aggregates (RCM and RHC);
e) Clause 5.2.5.5.1: addition of option for delivery tickets to be electronically provided;
f) Clause 7, Table 2, and Table 21: removal of "steel" for trowel finishes in recognition of alternative materials being used to manufacture trowels;
g) Clause 7.3: additional guidance for construction joints and contraction joints as well as reference to ACI 224.3R;
h) Clause 7.5.3.2: updated guidance on the use of vapour retarding membranes;
i) Clause 7.5.3.10: updated requirements for slab on ground thickness tolerances;
j) Clause 7.6.1: clarification on the use of evaporation retardants for the protection of concrete placements;
k) Clause 7.7.1.4: inclusion of ASTM E1155 to supplement ASTM E1155M for the use of US customary unit devices to measure F-numbers;
l) Clause 7.8.2.2: inclusion of ASTM C1315 for curing materials;
m) Clause 8.2: updated for mass concrete;
n) Clause 8.3: updated for mockup requirements and definitions in Clause 3 for architectural concrete;
o) Clause 8.6: updated and new definition for "viscosity" as it applies for self-consolidating concrete;
p) Clause 8.13: extensive updates for shotcrete;
q) Tables 1 and 2: clarifications to exposure classes;
r) Table 2: bulk resistivity options for C-1, C-XL, A-1, and A-XL concretes to be used with CSA A23.2-26C;
s) Table 5: addition of slump considerations for contractors when using Alternative 1;
t) Table 6: addition of an option to use cements conforming to ASTM C1157, with the owner's approval;
u) Tables 3, 6, and 7: harmonization with CSA A3000 for the removal of MH/MHL/LH/LHL cements and the addition of MSL and HSL portland limestone cements;
v) Table 8: harmonization with CSA A3000 for ground glass pozzolans, G_H and G_L, to be used in HVSCM;
w) Table 13: additional guidance notes for in batch uniformity;
x) Table 21: harmonization of F-number classifications and values with ACI 117;
y) Annex on special cements removed; Annex R moved to Annex A;
z) Annex on concrete surface tolerances removed; Annex T moved to Annex E;
aa) Annex E: updated for mass concrete;
ab) Annex H: updated for fibre-reinforced concrete;
ac) Annex on high-performance concrete removed; Annex U moved to Annex I;