Association

CAN3-A370-M84
Connectors for Masonry

A National Standard of Canada

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Canadian Standards Association
178 Rexdale Boulevard
Rexdale (Toronto), Ontario, Canada
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The principal objects of the Council are to foster and promote voluntary standardization as a means of advancing the national economy, benefiting the health, safety, and welfare of the public, assisting and protecting the consumer, facilitating domestic and international trade, and furthering international cooperation in the field of standards.

A National Standard of Canada is a standard which has been approved by the Standards Council of Canada and one which reflects a reasonable agreement among the views of a number of capable individuals whose collective interests provide to the greatest practicable extent a balance of representation of producers, users, consumers, and others with relevant interests, as may be appropriate to the subject in hand. It normallly is a standard which is capable of making a significant and timely contribution to the national interest.

Approval of a standard as a National Standard of Canada indicates that a standard conforms to the criteria and procedures established by the Standards Council of Canada. Approval does not refer to the technical content of the standard; this remains the continuing responsibility of the accredited standards-writing organization.

Those who have a need to apply standards are encouraged to use National Standards of Canada whenever practicable. These standards are subject to periodic review; therefore, users are cautioned to obtain the latest edition from the organization preparing the standard.

The responsibility for approving National Standards of Canada rests with the
Standards Council of Canada
350 Sparks Street
Ottawa, Ontario
K1R 7S8

Les Normes nationales du Canada sont disponibles en versions française et anglaise.

General Instruction No. 1

CAN3-A370-M84
March, 1984

CSA Standard CAN3-A370-M84, Connectors for Masonry, consists of **55** pages, each dated **March, 1984.**

This Standard, like all CSA Standards, is subject to periodical review, and amendments in the form of replacement pages may be issued from time to time; such pages will be mailed automatically to those purchasers who complete and return the attached card.* Some Standards require frequent revision between editions, whereas others require none at all. It is planned to issue new editions of the Standard, regardless of the amount of revision, at intervals not greater than 5 years. Except in unusual circumstances, replacement pages will not be issued during the last year of that edition.

**This card will appear with General Instruction No. 1 only.*

Although any replacement pages that have been issued will be sold with the Standard, it is for the purchaser to insert them where they apply. The responsibility for ensuring that his or her copy is complete rests with the holder of the Standard, who should, for the sake of reference, retain those pages which have been replaced.

Note: *A General Instruction sheet will accompany replacement pages each time they are issued and will list the latest date of each page of the Standard.*

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CSA Standard CAN3-A370-M84

Canadian Standards Association
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General Instruction No. 2

CAN3-A370-M84
May, 1985

CSA Standard CAN3-A370-M84, Connectors for Masonry, was published in March, 1984; it consisted of 55 pages, each of which was dated March, 1984.

Errata to Clauses C5.1(b)(vii) and C6.1(a)(iv), and to Appendix F are incorporated (and identified by a vertical line in the margin) in the attached replacement pages.

CSA Standard CAN3-A370-M84 now consists of the following pages:

3—40, 45—52, and **55** dated **March, 1984;**

41—44, 53, and **54** dated **May, 1985.**

These replacement pages are to be inserted into your copy of the Standard; the pages replaced should be kept for reference.

Appendix C
Recommended Working Loads for Standard Connectors

Note: *This Appendix is not a mandatory part of this Standard.*

C1. General

C1.1
Values for recommended working strengths for some standard connectors are listed in Clauses C5 and C6 to assist designers in selecting connectors for specific purposes. For general design and installation information reference should be made to CSA Standards CAN3-S304-M and CAN3-A371-M.

C2. Derivation of Values

C2.1
The working loads listed in Clauses C5 and C6 have been derived from available test data and from calculations. Because the available test data from which these values have been derived are very sparse, it has been necessary to interpolate and make arbitrary adjustments to obtain some of the values given. In general, however, the values are thought to be conservative. Tests conducted in accordance with Clause 10 of this Standard may indicate that higher values may be used safely.

C3. Factors of Safety and Design Assumptions

C3.1
The factors of safety applied to test data are those listed in Table 3 of this Standard. The factors of safety used in analytical derivations are those generally used in engineering practice, eg, 60% of the yield strength was used in determining the direct tensile strength of steel connectors.

Certain assumptions have been made for the sake of simplicity. For example, a wire tie connecting two wythes of masonry has been considered as a pin-ended column with an effective length equal to the clear distance between the wythes.

C4. Rules for Use of Working Loads

C4.1
The values listed in Clauses C5 and C6 are valid only for the physical conditions of embedment, spacing, etc, given for standard connectors under Clause 8 of this Standard, unless specifically noted otherwise. All values are based on Type N mortar. Test programs may indicate that higher working loads can be used with stronger mortar. When Type O mortar is employed, 50% of the working loads listed in Clauses C5 and C6 may be used.

In any specific application the working load of a connector will be governed by only one of the values given. For example, the strength of a wire tie crossing a wide cavity may be governed by its compressive strength in buckling, but if the cavity is filled with mortar, it may depend on its pullout resistance.

Although load values are given in Clauses C5 and C6 for connectors in wall cavities up to 150 mm wide, it should be noted that the design of the cavity walls themselves must conform either to an engineering analysis or to empirical rules that specifically permit the use of wide cavities.