

# Composite insulators for guy wires



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*The Technical Committee wishes to acknowledge the role played by J. Duxbury as Chair of the Technical Committee during the development of this Standard.*

# Preface

This is the first edition of CSA C411.7, *Composite insulators for guy wires*.

This Standard is based on the requirements of Canadian Electricity Association (CEA) LWIWG-03 (96), *Guy Composite Insulator for Guy Wires* (used with permission from CEA).

CSA C411.7 covers the requirements for guy composite insulators used in guy wires on overhead distribution lines. Its main objective is to define terms, prescribe test methods, and specify acceptance or failure criteria. [Clauses 4 to 8](#) specify the material, product qualification, construction, and test requirements applicable to these insulators.

The co-operation of CEA and the contribution of its members are gratefully acknowledged. Funding in support of the preparation of this Standard was provided by CEA.

This Standard was prepared by the Technical Committee on Insulators, under the jurisdiction of the Strategic Steering Committee on Power Engineering and Electromagnetic Compatibility, and has been formally approved by the Technical Committee. It will be submitted to the Standards Council of Canada for approval as a National Standard of Canada.

April 2011

## 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.
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# C411.7-11

## ***Composite insulators for guy wires***

### **1 Scope**

#### **1.1**

This Standard covers the requirements for guy composite insulators used in guy wires on overhead distribution lines operating at nominal voltages up to and including 75 kV. Guy insulators insulate or isolate guy wires for corrosion protection, higher insulation levels, clearances for maintenance and normal operation, and safety for the public and workers (joint-use). Guy composite insulators are subjected to tensile and torsional loads.

The composite insulators are intended to operate in a service environment within a temperature range of -50 to 50 °C.

#### **1.2**

This Standard deals with guy composite insulators having a core with metal fittings and a coating. The core of the insulator has resin-impregnated glass fibres and is protected with a UV resistive coating.

#### **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; and “may” is used to express an option or that which is permissible within the limits of the standard.

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 (nonmandatory) to define their application.

### **2 Reference publications**

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below.

#### **CSA (Canadian Standards Association)**

C22.3 No. 1-10

*Overhead systems*

C83-96 (R2005)

*Communication and power line hardware*

CAN/CSA-G164-M92 (withdrawn)

*Hot dip galvanizing of irregularly shaped articles*

CAN/CSA-ISO 9001-08

*Quality management systems — Requirements*