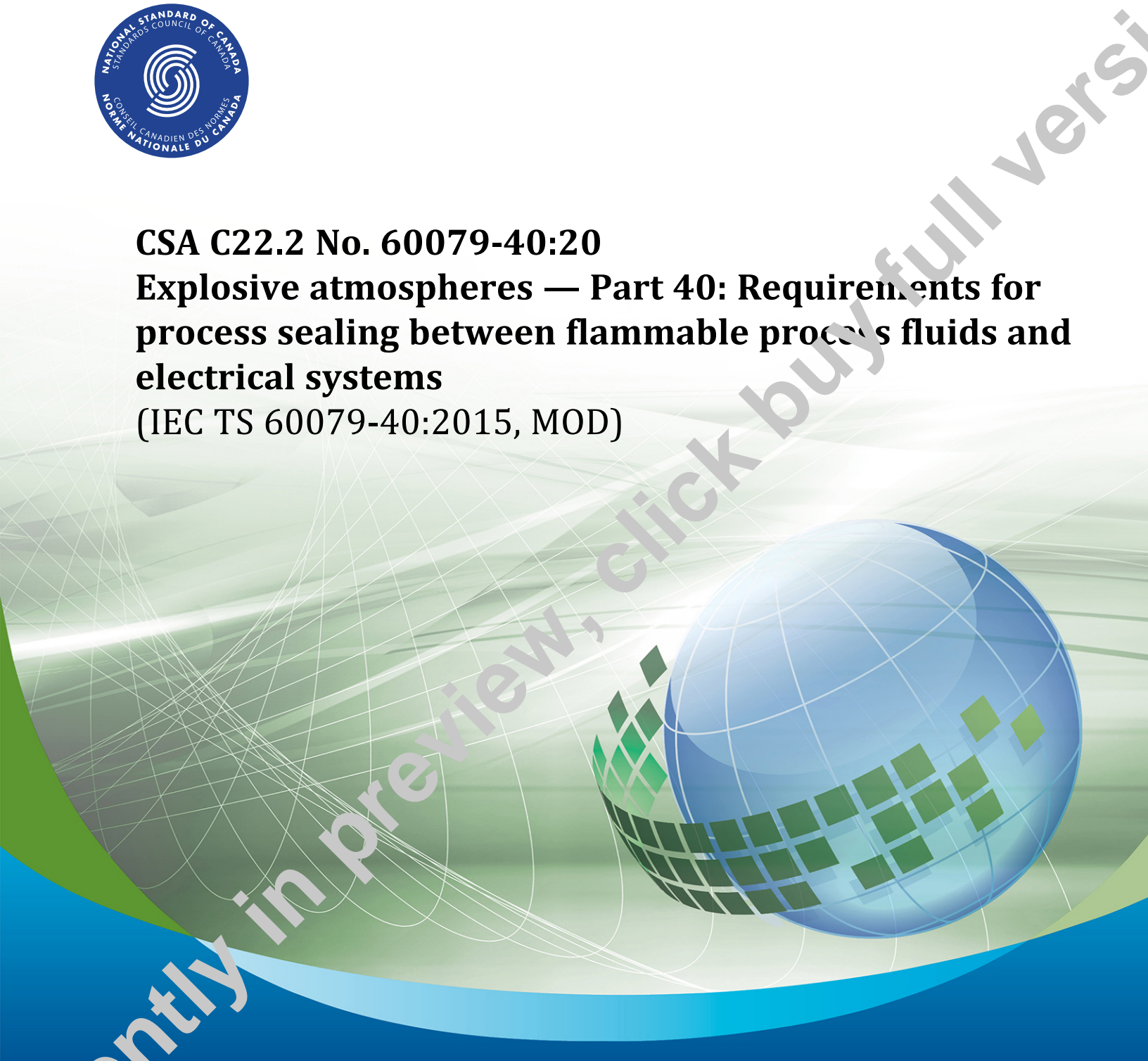




**CSA C22.2 No. 60079-40:20**  
**Explosive atmospheres — Part 40: Requirements for**  
**process sealing between flammable process fluids and**  
**electrical systems**  
(IEC TS 60079-40:2015, MOD)



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# CSA C22.2 No. 60079-40:20

## **Explosive atmospheres — Part 40: Requirements for process sealing between flammable process fluids and electrical systems**

*(IEC TS 60079-40:2015, MOD)*

### **CSA Preface**

This is the first edition of CSA C22.2 No. 60079-40, *Explosive atmospheres — Part 40: Requirements for process sealing between flammable process fluids and electrical systems*, which is an adoption, with Canadian deviations, of the identically titled IEC (International Electrotechnical Commission) Technical Specification 60079-40 (first edition, 2015-02). It is one in a series of standards issued by CSA Group under Part II of the *Canadian Electrical Code*. At the time of publication, IEC TS 60079-40:2015 is available from IEC in English only. CSA Group will publish the French version when it becomes available from IEC.

For brevity, this Standard will be referred to as “CSA C22.2 No. 60079-40” throughout.

This Standard is intended to be used in conjunction with CSA C22.2 No. 60079-0, *Explosive atmospheres — Part 0: Equipment — General requirements*.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

The Technical Specification was reviewed for Canadian adoption by the CSA Integrated Committee on Hazardous Location Products, under the jurisdiction of the CSA Technical Committee on Industrial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

**Interpretations:** The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretation of standards under its jurisdiction: “The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant CSA committee interpretation has not already been published, CSA Group’s procedures for interpretation shall be followed to determine the intended safety principle.”

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- c) wording of the proposed change; and
- d) rationale for the change.

# TECHNICAL SPECIFICATION

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**Explosive atmospheres –  
Part 40: Requirements for process sealing between flammable process fluids  
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# TECHNICAL SPECIFICATION

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**Explosive atmospheres –  
Part 40: Requirements for process sealing between flammable process fluids  
and electrical systems**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 29.260.20

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**EXPLOSIVE ATMOSPHERES –****Part 40: Requirements for process sealing between flammable process fluids and electrical systems**

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 60079-40, which is a technical specification, has been prepared by IEC technical committee 31: Equipment for explosive atmospheres.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
31/1134/DTS	31/1170/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60079 series, published under the general title *Explosive atmospheres*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

## EXPLOSIVE ATMOSPHERES –

### Part 40: Requirements for process sealing between flammable process fluids and electrical systems

#### 1 Scope

This document provides specific requirements for process sealing between a flammable process fluid and an electrical system where a failure could allow the migration of the process fluid directly into the premises wiring system.

NOTE Some definitions differentiate the terms “flammable” and “combustible” liquids on the basis of their flashpoints. Combustible liquids under conditions of elevated pressure and/or temperature can lead to the formation of flammable mists and aerosols which are within the scope of this technical specification.

This document contains requirements for evaluation, construction and testing of single process seal equipment, dual process seal equipment, and add-on secondary process seals.

The requirements of this document do not apply to conduit sealing devices, cable glands and other wiring sealing methods addressed in the IEC 60079 series or other standards.

Requirements for basic electrical safety and explosion protection are not addressed by this document, but may apply to the equipment under investigation. The effects of leakage to the environment are not addressed by this document.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60079-0, *Explosive atmospheres – Part 0: Equipment – General requirements*

IEC 60079-2, *Explosive atmospheres – Part 2: Equipment protection by pressurized enclosure “p”*

#### 3 Terms and definitions

For the purposes of this document the following terms and definitions apply.

NOTE See Figure 1 for a graphical representation of the various process seal components.