

**BUILDING MATERIALS EVALUATION COMMISSION
(BMEC)
AUTHORIZATION REPORT**

DATE OF AUTHORIZATION
BMEC AUTHORIZATION
BMEC APPLICATION

OCTOBER 31, 2002
BMEC # 02-05-276
A2002-09

Plenum-Gard®, Riser-Gard® and Resi-Gard® Raceways

1. Applicant

Carlson, Lamson & Sessions Inc.
25701 Science Park Drive

Cleveland, Ohio
USA
44122

Tel: (216) 766-6645

Fax: (216) 831-0438

2. Manufacturing Facilities

Lamson & Sessions
4395 Pasadena Fwy and Tenneco
Rd
PO Box 5664, Pasadena, TX
USA
77508

Pyramid Industries, Lamson &
Sessions
1422 Irwin Drive
PO Box 8439, Erie, PA
USA
16505

3. Description

Carlson, Lamson & Sessions Inc.™ Plenum-Gard®, Riser-Gard®, Resi-Gard raceways are used in the voluntary protection and management of fibre optics and communication cables. The raceways are flexible, pliable, nonmetallic and marked in conformance with ULC/ORD-C2024-02.

4. Authorization Requested

The applicant sought authorization for the use of their product as a cable management system in all locations, in buildings of all types of construction where cables would be permitted to be installed under the Ontario Electrical Safety Code, 23rd Edition 2002 without conduit protection. These raceways are intended to better organize cables in all spaces in buildings to facilitate the removal of cables.

5. Assessment

Reports and assessments provided by the applicant show that if the Plenum-Gard®, Riser-Gard®, Resi-Gard™ Raceways are designed, performance tested and maintained in accordance with the limitations of the manufacturer's instructions; and they meet the level of performance required by the Ontario Building Code in locations where electrical wires and cables are required to meet FT-6, FT-4, and FT-1 ratings.

Reports submitted and reviewed:

1. Technical Background Information Memo relating to the Carlon, Lamson & Sessions Inc. Plenum-Gard®, Riser-Gard® and Resi-Gard™ Raceways, Dated July 18, 2002.
2. Manufacturer's Literature: "Carlon® Flexible Raceway Systems" (Plenum-Gard® and Riser-Gard®).
3. Manufacturer's Literature: "Carlon® Structured Cable Management Systems" (Resi-Gard®).
4. ULC/ORD-C2024-02 " Standard Method of Fire Tests for Optical Fibre Cable Raceways."
5. Installation Manual for Resi-Guard®:Carlon® Structured Cable Management Systems Handbook.
6. Lamson & Sessions Pasadena, Ca. Plant Quality Manual, revised September 2002
7. Pyramid Industries Quality Manual ISO 9002, revised September 2002
8. Certification: Underwriter Laboratories Inc, File E-151168, Project 02ME10205, dated May 28, 2002, Filing Category "Optical Fibre/Communication Cable Raceways (QAZM)."
9. Interpretation letter from ULc dated, September 18, 2002.

6. Authorization

The Plenum-Gard®, Riser-Gard®, Resi-Gard™ raceways ("the raceways") are authorized for use as a cable management system in all locations, in buildings of all types of construction where cables would be permitted to be installed under the Ontario Electrical Safety Code, 23rd Edition 2002 without conduit protection.

A. Specific Terms and Conditions

1. This authorization is valid only for flexible nonmetallic raceways and associated fittings manufactured by Carlon, Lamson & Sessions Inc. and identified as follows:
 - (a) Plenum-Gard® raceway and fittings for optical fibre and communications cables marked OFCR-FT-6,
 - (b) Riser-Gard® raceway and fittings for optical fibre and communications cables marked OFCR-FT-4, and
 - (c) Resi-Gard™ raceway and fittings for optical fibre and communications cables marked OFCR-FT-1
2. The raceways and fittings shall be:
 - (a) Tested and certified in conformance with ULC/ORD-C2024-02 "Standard Method of Fire Tests for Optical Fibre Cable Raceway", and
 - (b) Marked in conformance with ULC/ORD-C2024-02 as follows:
 - (i) Raceways complying with FT-6 requirements shall be marked with "Plenum-OFCR FT-6",
 - (ii) Raceways complying with FT-4 requirements shall be marked with "Riser-OFCR FT-4", and
 - (iii) Raceways complying with FT-1 requirements shall be marked with "General-OFCR FT-1".
3. In addition to the other conditions listed herein, the raceways may be used only in the following locations:
 - (a) Plenum-Gard® may be used in all locations in buildings, including concealed spaces used as plenums, where an FT-6, FT-4 or FT-1 rating for cables or raceways is required,
 - (b) Riser-Gard® may be used in all locations in buildings where an FT-4 or FT-1 rating for cables or raceways is required, and
 - (c) Resi-Gard™ may be used in all locations in buildings where an FT-1 rating for cables or raceways is required.
4. The raceways shall be used to contain only cables conforming to Section 56 (Optical Fiber Cables) and Section 60 (Electrical Communications Cables) in CSA C22.1-02 – Ontario Electrical Safety Code, 23rd Ed, 2002, Part 1.

5. The raceways shall be used to contain cables only where a raceway or conduit is not required for protection of cables by CSA C22.1-02 – Ontario Electrical Safety Code, 23rd Ed, 2002, Part 1.
6. The raceways shall not be used to contain cables for fire alarm and voice communications systems as described in Subsection 3.2.4 of the Ontario Building Code as amended.
7. The raceways shall comply with Sentence 3.1.9.2.(1) and 3.1.9.3.(2) of the Ontario Building Code as amended when they penetrate fire separations.

B. General Conditions

1. The use of Carlon, Lamson & Sessions Inc. raceways as described in 6. A. Specific Terms and Conditions No. 1. must comply with the *Building Code Act, 1992* as amended or re-enacted from time to time and except as specifically authorized herein, with the Ontario Building Code as amended or remade from time to time.
2. A copy of this Authorization shall accompany each application for a building permit and shall be maintained on the site of the construction with the building permit.
3. The Applicant named in Part 1 hereof shall promptly notify the BMEC of:
 - (a) the failure of the Applicant, or of the material, system or building design that is the subject matter of this Authorization, to comply with any of the terms and conditions set out in 6. A. above; or
 - (b) the occurrence of any of the events described in Conditions 6. B. 4. (a) and (b) (ii) below.
4. The BMEC may amend or revoke this Authorization where it determines that:
 - (a) any change has been made to:
 - i. the material, system or building design that is the subject matter of this Authorization;
 - ii. the address of the applicant specified in Part 1 of this Authorization; or,
 - iii. the ownership of the applicant specified in Part 1 of this Authorization.

- (b) the use of the material, system or building design authorized herein;
 - i. does not comply with the *Building Code Act, 1992* or any relevant legislation as they may be amended or re-enacted from time to time; or
 - ii. provides an unsatisfactory level of performance, in situ.
 - (c) the Applicant, or the material, system or building design that is the subject matter of this Authorization, has failed to comply with any of the terms and conditions set out in this Authorization; or
 - (d) any Ontario Building Code provision relevant to this Authorization has been amended or remade.
5. Where the Commission receives additional information concerning the material, system or building design authorized herein, the Commission may review this Authorization and the Commission may after the review amend or revoke this Authorization as in the opinion of the Commission may be necessary.

Dated at Toronto this 31st day of October 2002.

BUILDING MATERIALS EVALUATION COMMISSION

Rashmi Nathwani, Chair