

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

DATE OF AUTHORIZATION September 25, 2003
BMEC AUTHORIZATION BMEC # 03-09-288
BMEC APPLICATION #A 2003-09

DATE OF AMENDMENT October 30, 2003

* Denotes the new product name

DATE OF AMENDMENT October 30, 2004

** Denotes amendment

**** HAWORTH LTD**

*** Nexus™ Floor System**

1. Applicant

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2. Manufacturing Facilities

** Haworth Ltd
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3. Description

The Haworth Ltd Nexus™ Floor System consists of steel encapsulated fibreboard panels supported on pedestals that are positioned by means of interlocking plastic webbing. The system functions as a low-profile raised floor system providing access for electrical and telecommunications accessories, primarily in commercial offices interiors.

4. Authorization requested

The applicant sought a Building Materials Evaluation Commission (BMEC) authorization for the Nexus™ Floor System where the plastic webbing would be considered, with limitations, equivalent to the requirements of OBC Sentence 3.1.5.8.(2). "Combustible Flooring Elements."

5. Assessment

Reports and assessments provided by the applicant show that if the Nexus™ Floor System is designed, performance tested and installed in accordance with the manufacturer's instructions and limitations and the specific terms and conditions stated in this authorization, the level of performance required by the OBC will be provided.

Reports submitted, and reviewed:

1. SMED International Specifications, Constructive Solutions "Section 102070 Cellular Access Floor", 05/2002.
2. Letter correspondence, May 12, 2003, Gage-Babcock & Associates.
3. Equivalency Report, February 13, 2002, City of Vancouver.
4. City of Winnipeg, December 17, 2002, "The Use of The Nexus Cellular Access Floor System in Buildings Required to be Constructed of Noncombustible Construction."
5. ES Report, PFS-5657, ICBO Evluation Services, Inc " The Nexus Low-Profile Accessible Floor", September 1, 2001.
6. NES, Report No. NER-566, December 1, 2001, "Nexus Access Floor System."
7. ISO 9001:2000 Certificate of Registration, 2001/03/07, Certificate No. 01696.
8. The Nexus™ Cellular Access Floor System Installation Instructions.
9. Structural Tests:
 - (a) ITS 484-1668 Inform Loading and Pedestal Axial-Loading Tests
 - (b) ITS 484-1488 Concentrated Load Test Report, R1
 - (c) ITS 484-1488 Concentrated Load Test Report, R2
 - (d) SGS 135072 Load/Deflection and Permanent Set Test Report
 - (e) SWL 918354 Rolling Load Test report
 - (f) SWL 918368 Rolling Load Test report
 - (g) RAD-2522 Adhesive Tests
 - (h) RAD-2707 Adhesive Tests
10. Flammability Tests:
 - (a) ITS 3007701 Panels- Surface Burning Test Report, CAN/ULC-S102-M.
 - (b) ITS 483-8088 Webbing - Surface Burning Test Report, CAN/ULC-S102-M.
 - (c) HAI/OPL 15486 Heat Release Comparison of Webbing with Wood Sleepers (ASTM E1354)

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| (d) | SGS 128680-R2 | Critical Radiant Flux test Report (ASTM E648) |
| (e) | ITS 491-7994 | Top of Floor Fire Simulation Test Report (ICBO-ES AC151 Annex 1) |
| (f) | SGS 136917-1 | Smoke Density Test - Webbing (ASTM D2843) |
| (g) | SGS 136917-1 | Rate of Burning Test - Webbing (ASTM D635) |
| (h) | SGS 109299-1 | Ignition Properties of Plastic Test - Webbing (ASTM D1929) |
| (l) | UL R13520 | Mineral Fibre Batt |
11. Electrical Equivalency, ESA 10-19-0, Ontario ESA Bulletin - Ground Computer Room Flooring, July 2002.
 12. SMED International, Quality Assurance Manual, 12/13/2002.
 13. SGS Test Report No:178461, August 5, 2003.

6. Authorization

Use of the Haworth Ltd. Nexus™ Floor System is authorized for use as an access floor system incorporating plastic webbing and is considered, with limitations, equivalent to the requirements of OBC Sentence 3.1.5.8.(2); all other requirements pertaining to the installation are subject to the requirements of the OBC, and are subject to the following terms and conditions:

A. Specific Terms & Conditions

1. This authorization is valid only for the Haworth Ltd. Nexus™ Floor System.
2. The Nexus™ Floor System shall only be installed in Group D, occupancies as it is defined in the OBC.
3. The space under the Nexus™ Floor system shall be subdivided into areas not larger than 10 m², and shall be fire stopped as per the requirements of OBC Sentence 3.1.11.3.(2).
4. The space under the Nexus™ Floor System shall not be used for storage.
5. The space under the Nexus™ Floor System shall not be used for air handling or as a plenum.
6. The Nexus™ Floor System shall not be designed to carry a uniform live load greater than 16 kPa.
7. The Nexus™ Cellular System shall be installed as per the prescribed "Nexus™ Installation Instructions, October 2001."

8. The Nexus™ Floor System shall be installed on a noncombustible, floor or subfloor that is smooth, clean, dry, and flat with a maximum allowable deviation of 10 mm per 3000 mm horizontal run and with no discontinuities in the surface.
9. Fibre optic cables and electrical wires located in the space under the Nexus™ Floor System shall not be considered as being protected against exposure to fire.
10. Where the Nexus™ Floor System is cut during field installations the exposed edge shall be:
 - (a) substantially covered by an electrical device box protruding through the floor panel, or
 - (b) positioned to abut interior construction surfaces and separated from the underfloor space by a continuous steel support channel, or
 - (c) covered by an overlapping steel channel, minimum 30 gauge, which substantially covers the cut edge of the panel.

B. General Conditions

1. The use of the Haworth Ltd. Nexus™ Floor System 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 OBC 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 OBC 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.

Amended at Toronto on this 30th day of October 2004.

BUILDING MATERIALS EVALUATION COMMISSION

per: Rashmi Nathwani, Chair