



Note: The MUNI implemented in November 2018 replaces OPSS 1605 COMMON, November 2010 with no technical content changes.

MATERIAL SPECIFICATION FOR EXTRUDED EXPANDED POLYSTYRENE PAVEMENT INSULATION

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1605.01 SCOPE

This specification covers extruded expanded polystyrene for use as pavement insulation for frost heave treatment of pavements.

1605.01.01 Specification Significance and Use

This specification is written as a municipal-oriented specification. Municipal-oriented specifications are developed to reflect the administration, testing, and payment policies, procedures, and practices of many municipalities in Ontario.

Use of this specification or any other specification shall be as specified in the Contract Documents.

1605.01.02 Appendices Significance and Use

Appendices are not for use in provincial contracts as they are developed for municipal use, and then, only when invoked by the Owner.

Appendices are developed for the Owner's use only.

Inclusion of an appendix as part of the Contract Documents is solely at the discretion of the Owner. Appendices are not a mandatory part of this specification and only become part of the Contract Documents as the Owner invokes them.

Invoking a particular appendix does not obligate an Owner to use all available appendices. Only invoked appendices form part of the Contract Documents.

The decision to use any appendix is determined by an Owner after considering their contract requirements and their administrative, payment, and testing procedures, policies, and practices. Depending on these considerations, an Owner may not wish to invoke some or any of the available appendices.

1605.02 REFERENCES

When the Contract Documents indicate that municipal-oriented specifications are to be used and there is a municipal-oriented specification of the same number as those listed below, references within this specification to an OPSS shall be deemed to mean OPSS.MUNI, unless use of a provincial-oriented specification is specified in the Contract Documents. When there is not a corresponding municipal-oriented specification, the references below shall be considered to be the OPSS listed, unless use of a provincial-oriented specification is specified in the Contract Documents.

This specification refers to the following standards, specifications, or publications:

Underwriters Laboratories of Canada (ULC)

CAN/ULC S701-11 Thermal Insulation, Polystyrene, Boards and Pipe Covering

1605.03 DEFINITIONS

For the purpose of this specification, the following definitions apply:

Extruded Expanded Polystyrene Pavement Insulation means insulation in the form of rigid boards made by extrusion of expanded polystyrene beads.

Production Lot means the quantity of insulation boards produced in a continuous period of manufacturing the same grade and thickness of product within the same production day.

Truckload means a truck, including trailer, loaded with rigid insulation boards.

1605.05 MATERIALS

The extruded expanded polystyrene boards shall be according to the requirements of CAN/ULC S701, Type 4, with the exception of the compressive strength.

The minimum compressive strength for each grade shall be according to Table 1.

1605.07 PRODUCTION

Each board of the same production lot shall be stamped with the same production code showing plant identification, type, grade, and date of production (i.e., yyyy-mm-dd).

1605.08 QUALITY ASSURANCE

1605.08.01 Certificate of Compliance

Test certificates for each production lot supplied showing compliance with all requirements of this specification shall be obtained by the Contractor and submitted to the Contract Administrator prior to installation.

1605.08.02 Sampling

One board from each production lot on each truckload shall be selected at random by the Contract Administrator when the material arrives at the job site. The samples shall be tested by a laboratory designated by the Owner for compliance with this specification.

1605.08.03 Testing

All test procedures shall be according to CAN/ULC S701.

The compressive strength shall be the average of 5 specimens taken at different places across the width of the board and determined on the face perpendicular to the extrusion plane.

1605.08.04 Acceptance or Rejection

Failure of any one of the sample boards to comply with any requirement of this specification shall be cause for rejection of the production lot from which it was taken. Culling of the rejected material by the Contractor shall be permitted and a proposal for retesting the remaining material shall be submitted to the Contract Administrator to demonstrate conformance with the specification. Retesting of material remaining from culling rejected material shall be at no cost to the Owner.

1605.09 OWNER PURCHASE OF MATERIAL

1605.09.01 Measurement and Payment

Measurement of extruded expanded polystyrene pavement insulation shall be by area in square metres.

Payment at the price specified in the purchasing order shall be for the supply of extruded expanded polystyrene pavement insulation delivered to the destination on the date and time specified.

The cost of all testing, except that performed in the Owner's laboratory, shall be included in the price.

TABLE 1
Minimum Compressive Strength

Grade	Minimum Compressive Strength, kPa at 5% Deflection or Yield
A	275
B	400
C	690

**Appendix 1605-A, November 2018
FOR USE WHILE DESIGNING MUNICIPAL CONTRACTS**

Note: This is a non-mandatory Commentary Appendix intended to provide information to a designer, during the design stage of a contract, on the use of the OPS specification in a municipal contract. This appendix does not form part of the standard specification. Actions and considerations discussed in this appendix are for information purposes only and do not supersede an Owner's design decisions and methodology.

Designer Action/Considerations

The designer should ensure that the General Conditions of Contract and the 100 Series General Specifications are included in the Contract Documents.

Related Ontario Provincial Standard Drawings

OPSD 514.010	Extruded Expanded Polystyrene Frost Heave Treatment, 25 mm Thickness
OPSD 514.020	Extruded Expanded Polystyrene Frost Heave Treatment, 40 mm Thickness