



**MATERIAL SPECIFICATION FOR  
NON-PRESSURE POLYPROPYLENE (PP) PLASTIC PIPE PRODUCTS**

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**1843.01 SCOPE**

This specification covers the requirements for non-pressure polypropylene (PP) plastic pipe products to be used for sanitary or storm sewers and pipe culverts.

**1843.01.01 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.

## 1843.01.02 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.

## 1843.02 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:

### CSA Standards

B182.13-18 Profile Polypropylene (PP) Sewer Pipe and Fittings for Leak-Proof Sewer Applications  
[Part of B1800-15, Thermoplastic Non-Pressure Piping Compendium]

## 1843.03 DEFINITIONS

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

**Certification Body** means an independent 3<sup>rd</sup> party agency, accredited by the Standards Council of Canada that has the qualifications, skills, and expertise required to confirm that a pipe manufacturer produces pipe products to the quality and requirements of an accepted standard and that has the mandate to certify the pipe products produced.

**Certified** means pipe products that have been marked with a certification body's logo confirming that the production of the pipe product is in accordance with the quality and requirements of CSA B182.13.

**Closed Profile Pipe** means a pipe product that has a hydraulically smooth waterway reinforced circumferentially or spirally with corrugations that are joined integrally by an essentially smooth outer wall.

**Delivered Quality** means the pipe products' physical condition upon arrival at the construction site in terms of the extent and degree of dents, scratches, cracks, pipe coating integrity, etc., that appear on the pipe products delivered.

**Open Profile Pipe** means a pipe product that has a hydraulically smooth waterway reinforced circumferentially or spirally with outside corrugations.

**Polypropylene Plastic** means a material made with virgin polymers in which propylene is essentially the sole monomer.

**Profile** means a pipe wall construction that presents an essentially smooth surface in the waterway but includes ribs or other shapes, which can be either solid or hollow that helps brace the pipe against diametrical deformation.

## **1843.05 MATERIALS**

### **1843.05.01 Polypropylene Plastic Pipe Products**

The moulding and extrusion material shall be polypropylene plastic according to CSA B182.13 for profile sewer and drainage pipe.

## **1843.07 PRODUCTION**

### **1843.07.01 Requirements**

The pipe diameter, stiffness, material, and type for all polypropylene plastic pipe products shall be as specified in the Contract Documents.

Polypropylene plastic pipe products shall be produced according to CSA B182.13 for profile sewer and drainage pipe and fittings.

All polypropylene plastic pipe products used on the Contract for sewers and culverts shall be certified and supplied from a manufacturer that produces the polypropylene plastic pipe products according to CSA B182.13.

When the delivered quality of certified polypropylene plastic pipe products is deemed to be unacceptable by the Contract Administrator, the products shall be rejected.

## **1843.08 QUALITY ASSURANCE**

### **1843.08.01 Testing**

Test methods for profile polypropylene plastic pipe products shall be according to CSA B182.13.

### **1843.08.02 Markings**

Markings for certified polypropylene plastic pipe products shall be according to CSA B182.13.

As a minimum, the following markings shall be placed, notwithstanding any other required markings, in accordance with the applicable standard:

- a) Pipe nominal size.
- b) Standard designation (e.g., CSA B182.13).
- c) Manufacturer.

d) Accredited certification body's logo.

Accepted certification body logo confirming certified polypropylene plastic pipe products shall be as shown in Figure 1.

**1843.08.03                      Certificate of Compliance**

When requested by the Owner, the Contractor shall provide a copy of the certificate of compliance from the manufacturer for storm sewers and pipe culverts. The manufacturer's certificate of compliance shall be issued by the certification body confirming that the manufacturer produces certified polypropylene plastic pipe products.

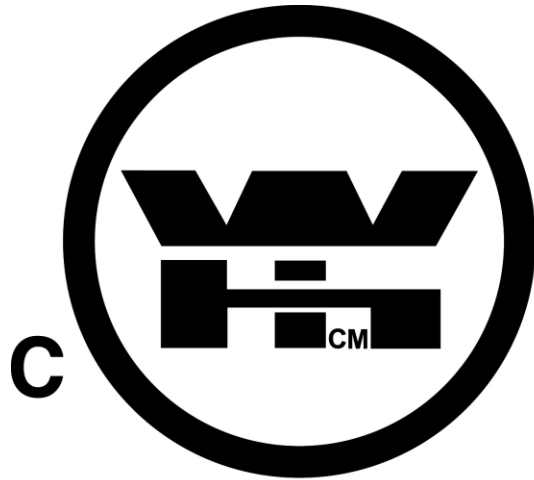
**1843.09                              OWNER PURCHASE OF MATERIAL**

Measurement of non-pressure polypropylene plastic pipe shall be by length in metres along the centreline of the pipe.

For measurement purposes, a count shall be made of the non-pressure polypropylene plastic pipe fittings supplied and delivered as noted on the purchasing order.

Payment at the price specified in the purchasing order shall be for the supply of non-pressure polypropylene plastic pipe products delivered to the destination on the date and time specified.

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



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**FIGURE 1**  
**Warnock Hersey - Intertek Certification Logo**

**Appendix 1843-A, November 2019  
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 specify the following in the Contract Documents:

- Pipe diameter, stiffness, material, and type. (1843.07.01)

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 802.010	Flexible Pipe Embedment and Backfill, Earth Excavation
OPSD 802.013	Flexible Pipe Embedment and Backfill, Rock Excavation
OPSD 802.014	Flexible Pipe Embedment in Embankment, Original Ground: Earth or Rock
OPSD 806.030	Height of Fill Table, Dual and Triple Wall Corrugated Polypropylene Gravity Sewer Pipe 320 kPa