B184 Series-17

Polymeric subsurface stormwater management structures

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Revision History

B184 Series-17, Polymeric subsurface stormwater management structures

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Contents

B184.2-17, *Polypropylene (PP) chambers*

Preface

This is the second edition of the CSA B184 Series of Standards, *Polymeric subsurface stormwater management structures*. It supersedes the first edition, published in 2011.

This Series consists of the following Standards:

- B184.0, *General requirements and methods of testing for polymeric subsurface stormwater management structures*;
- B184.1, *Polyethylene (PE) chambers*; and
- B184.2, *Polypropylene (PP) chambers*.

The changes to this edition include the following:

- removal of thermal stability and brittleness temperature;
- addition of average wall thickness to physical properties of PE and PP chambers; and
- updating table for physical properties of PP chambers.

CSA Group acknowledges that the development of these Standards was made possible, in part, by the financial support of Advanced Drainage Systems, Cultec, DI Labs Inc., and IPEX.

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

These Standards were prepared by the Technical Committee on Stormwater Structures, under the jurisdiction of the Strategic Steering Committee on Water Management Products, Materials, and Systems, and have been formally approved by the Technical Committee.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by* CSA Policy governing standardization — Code of good practice for standardization *as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
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   c) *wording of the proposed change; and*
   d) *rationale for the change.*

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General requirements and methods of testing for polymeric subsurface stormwater management structures

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B184.0-17
General requirements and methods of testing for polymeric subsurface stormwater management structures

0 Introduction

0.1

In undeveloped areas, rainwater is intercepted by vegetation and held in natural depressions and can be absorbed directly into the ground on which it falls. When an area is developed, buildings and parking areas cover the natural absorption areas where the rain would normally be infiltrated back into the ground. These impervious structures alter the typical absorption pattern. As a result, when the rain is not allowed to penetrate the ground it begins to accumulate and can cause ponding or flooding or flow to another location. Some consequences of flooding are as follows:

a) on roads: collisions, washouts, and traffic delays;
b) with buildings: structural and property damage, sewer backups, foundation settlement, and devaluation of property values;
c) environmental damage;
d) utility service interruptions;
e) creation of health hazards;
f) clean-up costs and increased insurance costs; and
g) personal inconvenience.

0.2

Subsurface stormwater structures are used in the collection, detention, retention, and infiltration of stormwater runoff. Structures can have configurations that include, but are not limited to, beds or trenches of various sizes or shapes designed to fit on most sites and offset the impact of impervious structures that cover natural absorption areas.

1 Scope

1.1

This Standard covers polymeric subsurface stormwater management structures and accessories used in the collection, detention, retention, and infiltration of stormwater runoff. Applications include, but are not limited to, commercial, municipal, residential, agricultural, industrial, recreational, and highway drainage.

Note: *In the CSA B184 Series, polymeric subsurface stormwater management structures are also referred to as "stormwater structures".*

1.2

This Standard specifies requirements for

a) materials and manufacture;