Bureau de normalisation du Québec

CAN/BNQ 3680-600/2023 (R 2024)

Onsite Domestic Wastewater Treatment Systems

STANDARD

CAN/BNQ 3680-600/2023
(R 2024)

Onsite Domestic Wastewater Treatment Systems

Systèmes de traitement autonome des eaux usées domestiques

Bureau de normalisation du Québec

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THIRD EDITION — 2024-10-01

This edition reaffirms (reapproves) the edition dated January 17, 2023, which now includes Amendment No. 1 dated August 6, 2024. Consequently, this edition is equivalent to the previous edition.

The decision resulting from the systematic review that will enable to determine whether the current document shall be modified, revised, reaffirmed or withdrawn will be implemented no later than at the end of October 2029.

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FOREWORD

This standard was developed in compliance with the Standards Council of Canada (SCC)'s Requirements and Guidance for standards development organizations and approved as a reaffirmed National Standard of Canada by the SCC. Its reaffirmation was approved by a Standards Development Committee, whose members were:

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BRIDGER, Valérie	Bionest Technologies
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1 At the time of publication of this standard, the aforementioned person no longer worked for this organization.

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CONTENTS

INTRODUCTION

This standard specifies performance-based requirements for onsite domestic wastewater treatment systems. It includes a performance and seasonal reliability test that consists of two parts: a first part (Part A) comprising periods of stress and frequent samplings spread over 180 consecutive days, and a second part (Part B), also spread over at least 180 additional consecutive days, that is more representative of normal operating conditions. The performance and seasonal reliability test performed over at least 360 consecutive days allows to confirm reliability of onsite domestic wastewater treatment systems under the climatic conditions prevailing in Canada through all four seasons, in a plant hardiness zone 3, 4 or 5a, as defined by Natural Resources Canada. This standard also comprises an annual field performance test that is used to confirm the continued performance of onsite domestic wastewater treatment systems.

The performance and seasonal reliability testing combined with the annual field performance testing ensures that onsite domestic wastewater treatment systems function reliably in Canadian climatic conditions and that their performance is maintained for the duration of their use, which means that the effluent treated with these systems consistently conforms to the requirements applicable to the model classification. This robust testing and verification protocol helps to protect environment and public health, and provides regulators with the confidence they need to support the use of these systems in their jurisdiction.

1 PURPOSE AND SCOPE

This standard specifies the requirements regarding materials, watertightness, structural resistance, noise, mechanical and electrical components and other physical characteristics of onsite domestic wastewater treatment systems as well as requirements on performance based on the minimal characteristics of the effluent treated with such systems. This standard also specifies the documentation to be provided by the manufacturers of these systems.

This standard specifies a 360-day performance and seasonal reliability test performed to ensure that each onsite domestic wastewater treatment system supplied with influent wastewater meeting known criteria produces a treated effluent conforming to the requirements applicable to its classification throughout all four seasons prevailing in Canada. This standard also specifies an annual continued performance test performed to ensure that an onsite domestic wastewater treatment system installed, used and maintained in accordance with the manufacturer’s recommendations continuously produces a treated effluent conforming to the requirements applicable to its classification.

This standard applies only to systems treating domestic wastewater, to the exclusion of any system designed exclusively for the treatment of black or grey water. This standard does not cover the capability nor the capacity of an onsite domestic wastewater treatment system to treat effluent from drinking water treatment systems or devices, or backwash water from swimming pools or spas.