STANDARD

BNQ 3624-027/2016

Polyethylene (PE) Pipe for the Transport of Fluids Under Pressure

BNQ
BUREAU DE NORMALISATION DU QUÉBEC

STANDARD

BNQ 3624-027/2016

Polyethylene (PE) Pipe for the Transport of Fluids Under Pressure

Tuyaux en polyéthylène (PE) pour le transport des liquides sous pression

ICS: 23.040.20; 23.040.45

BUREAU DE NORMALISATION DU QUÉBEC

REQUEST FOR INFORMATION AND PURCHASE

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FIRST ENGLISH EDITION — 2016-09-12

This document is published in both French and English. In case of incompatibility, the French version prevails.

This English translation is based on the fourth edition of the original French document.

The systematic review of this document to determine if it has to be modified, revised, reaffirmed or withdrawn will be initiated no later than 2022.

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The verb **shall** is used to express a requirement (mandatory) in order to comply with this document.

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Except for notes presented as **normative notes**, which set out mandatory requirements and which appear in the lower portion of figures and tables only, all other **notes** are **informative** (non-mandatory) and provide useful information intended to facilitate understanding or clarify the intent of a requirement or to add clarification or further details.

Normative annexes provide additional requirements (mandatory) in order to comply with this document.

Informative annexes provide additional (non-mandatory) information intended to assist in the understanding or use of elements of this document or to clarify its implementation. They contain no mandatory requirements for the purposes of compliance with this document.

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FOREWORD

This document was prepared by a Standards Development Committee, whose members were:

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The participation of Tom Kostarides from UPONOR Infra Ltd and Joël Lambert, formerly from the Ville de Trois-Rivières, is also worthy of mention.

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POLYETHYLENE (PE) PIPE FOR THE TRANSPORT OF FLUIDS UNDER PRESSURE

1 PURPOSE

This standard specifies the characteristics and test methods relating to solid-wall high-density polyethylene (HDPE) pipe having a hydrostatic design basis greater than or equal to 11 MPa.

NOTE — The designer may apply one or the other of the service coefficients in Table 2 for different working pressures.

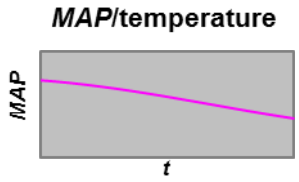
2 SCOPE

This standard applies to pipe designated by outside diameters belonging to three dimension ranges: CTS (copper tube size), IPS (iron pipe size) and DIPS (ductile iron pipe size) [see Table 1].

This standard applies to pipe designed for the transport of fluids under pressure, whether or not the fluids are loaded with solid particles. Such pipe is used specifically for raw water, drinking water and wastewater pipelines, for industrial and mining piping and for geothermal needs.

This standard does not apply to pipe intended for the transport and distribution of gas or to pipelines whose working temperature exceeds 60°C.

ATTENTION — Pipe defined in this standard is designed according to nominal pressures established at 23°C (see Table 2). The maximum allowable pressure *MAP* for a pipe component is in function of the temperature *t*, as the figure to the right illustrates. It follows that any mention of *MAP* shall be completed by the mention of the corresponding temperature. The thermal factors to use when calculating working pressure at temperatures exceeding 23°C shall be subject to a recommendation by the manufacturer.



This document was developed to serve as a reference document for conformity assessment activities of specific products.

NOTE — Conformity assessment is defined as the systematic examination of the extent to which a product fulfils specified requirements.

3 NORMATIVE REFERENCES

The references below (including any amendment or errata) are normative references, and are therefore considered mandatory. They are essential to the understanding and use of this document, and are cited in appropriate places in the text.

NOTE — This document also cites informative references that are of a non-mandatory nature. A list of these references is provided in the appendix.

It should be noted that a dated normative reference refers to that specific edition of the reference, while a non-dated normative reference refers to the latest edition of the reference in question.

3.1 DOCUMENTS FROM STANDARDS BODIES

BNQ (Bureau de normalisation du Québec) [www.bnq.qc.ca]

BNQ 1809-300	*Construction Work — General Technical Specifications — Drinking Water and Sewer Lines*. (Travaux de construction — Clauses techniques générales — Conduites d'eau potable et d'égout.)

ASTM International [www.astm.org]

ASTM D1598-02(2009)	*Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure*.
ASTM D1599-14	*Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings*.
ASTM D2122-15	*Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings*.
ASTM D2290-12	*Standard Test Method for Apparent Hoop Tensile Strength of Plastic or Reinforced Plastic Pipe*.
ASTM D3350-14	*Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.*