



KOMO[®]

Technical-approval-with product certificate

K43195/07



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Valid until Indefinite Dated 2021-05-01
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Ecoflex flexible pre-insulated piping system for heating and cooling

UPONOR GmbH

STATEMENT BY KIWA

This technical approval-with-product certificate on the basis of BRL 5609 Pre-insulated flexible plastics piping systems for warm water distribution outside buildings - Part 2: Products issued on 27 August 2019 by Kiwa, in accordance with the Kiwa Regulation for Certification.

The quality system and the product characteristics belonging to the Flexible pre-insulated piping system are checked periodically and the performance of the Flexible pre-insulated piping system in the application as floor heating is assessed. The basic principles for the assessment are checked periodically.

Based on this Kiwa declares that:

- legitimate confidence exists that the by the holder of the technical approval- with-product certificate delivered Flexible pre-insulated piping system comply with:
 - the technical specifications as laid down in this technical approval-with-product certificate;
 - the product requirements as laid down in this technical approval-with-product certificate, provided that they have been marked the Flexible pre-insulated piping system with the KOMO[®]-mark in the manner as indicated in this technical approval-with-product certificate;
- the Flexible pre-insulated piping system provides the performances as described in this KOMO technical approval-with-product certificate, provided that:
 - the application conditions and technical specifications as described in this KOMO approval-with-product certificate are met;
 - the manufacturing takes place according to the processing methods as laid down in this technical approval-with-product certificate.

Within the framework of this KOMO technical approval-with-product certificate there is no inspections with regard to the production of other parts of the Flexible pre-insulated piping system or the processing of the Flexible pre-insulated piping system.

Ron Scheepers
Kiwa

This product certificate with attestation is also included on the KOMO foundation websites: www.komo.nl and www.komo-online.nl.

Users of this product certificate with attestation is advised to check whether it is still valid. For this purpose consult the website of Kiwa: www.kiwa.nl.

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Assessed is:

- Quality system
- Product
- Performance in the application

Periodic control

Ecoflex flexible pre-insulated piping system for heating and cooling

TECHNICAL SPECIFICATION

Subject

Flexible pre-insulated piping system

Product characteristics

The product complies to BRL 5609 Pre-insulated flexible plastics piping systems for warm water distribution outside buildings - Part 2: Products.

The system consists of:

- PE-Xa 3-layer pipes manufactured by Uponor GmbH (certificate K43191);
- PE-Xa 3-layer pipes manufactured by Uponor GmbH (certificate K12041);
- Metal Q&E and Wipex fittings manufactured by Uponor GmbH (certificate K12062);
- PE-X Foam manufactured by Uponor GmbH (certificate K43194);
- VIP (Vacuum Insulated Panel) manufactured by Uponor GmbH (certificate K109658);
- Corrugated outer casing manufactured by Uponor GmbH (certificate K43193).

Specification

The dimensions of the pipe in the table below are part of this certificate.

Ecoflex Thermo pipes		Ecoflex VIP Thermo pipes	
Nominal outside diameter (mm)	Wall thickness (mm)	Nominal outside diameter (mm)	Wall thickness (mm)
25 *	2,3	25 *	2,3
32*	2,9	32*	2,9
40*	3,7	40*	3,7
50*	4,6	50*	4,6
63*	5,8	63*	5,8
75 *	6,8	75 *	6,8
90	8,2	90	8,2
110	10,0	110	10,0
125	11,4	125	11,4

* Single and twin pipe

The nominal diameters of the outer casing are

Nominal diameter outer casing pipe (mm)
140
175
200
250

Colour:

- Medium pipes: natural
- HDPE corrugated outer casing: black

Remarks:

- The piping package will be delivered with one medium carrying pipe (single-pipe) or two (twin-pipe) medium carrying pipes.
- The joints for the medium carrying pipe (metal fittings) are made with special tools.
- The producer declares for each system type (combination medium carrying pipe/outer casing pipe) the loss of heat per meter, calculated according to Annex V of BRL 5609-2.



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Marking

The products shall be marked with the KOMO[®] mark.

Pipes

The minimum required marking on the pipes shall be:

- KOMO (or KOMO[®] word mark) + class DH1/ 6 bar;
- material identification: PE-Xa;
- the build up of the pipe: PE-X/EVOH;
- certificate number of accompanying technical approval-with-product certificate of the piping system;
- the manufacturer's name, trade name, system name or logo;
- nominal outside diameter in mm;
- nominal wall thickness of the pipe in mm;
- production code.

The realization of the marks is as follows: clearly, durable and indelible at intervals of not more than 2 meters.

Fittings

The minimum required marking on the fittings shall be:

- KOMO (if not possible KOMO only on the smallest packaging);
- the manufacturer's name, trade name or logo;
- nominal outside diameter of the corresponding pipe;
- production code.

Location of the marks: on every fitting.

The realization of the marks is as follows: clearly, durable and indelible.

The minimum required marking on the smallest packaging unit of the fitting shall be:

- KOMO (or KOMO[®] word mark);
- certificate number of the accompanying technical approval-with-product certificate of the piping system, according the marking of the belonging pipe;
- the manufacturer's name, trade name, system name or logo;
- material identification if the fitting body is made of plastics;
- nominal outside diameter and nominal wall thickness of the corresponding pipe in mm.

Location of the marks: on every package.

The realization of the marks is as follows: clearly, durable and indelible on every packaging.

The minimum required marking on the Corrugated Outer Casing shall be:

- KOMO[®] (or KOMO[®] word mark);
- the manufacturer's name, trade name, the certificate number of the belonging technical approval (system) certificate.
- DH1 or District Heating or Stadsverwarming;
- design pressure 6 bar;
- nominal outside diameter of the inner pipe in mm;
- nominal outside diameter of the outer casing in mm;
- material identification: service pipe PE-Xa;
- production code.

The realization of the marks is as follows: clearly and indelible at intervals of not more than 2,5 m.

Logistics

Production and assembly of the system is laid down in the annex of the certification agreement.

PROCESSING

The supplier shall provide installation instructions. A reference to these instructions shall be made at or near the packaging. The instructions contain at least information with regard to storage, transport, processing temperature and construction of the joints.



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PERFORMANCES

1. The system is oxygen tight.
2. All joints are leak tight and possess sufficient clamp force to resist external influences.

PERFORMANCES OF THE PRODUCTS

The medium pipes and fittings are designed for warm water distribution outside buildings with a lifetime of 30 years at an operating temperature profile according to class DH1 of BRL 5609-2 and an allowable working pressure of maximum 6 bar.

The corrugated protection pipes have to protect the construction and protection against external influences (after installation).

TIPS FOR THE USER

Check on delivery of the products listed under the "technical specification" whether:

- The product(s) and material(s) ordered are delivered in accordance with the agreement you made.
- The brand and the method of marking is correct
- No defects or damage is visible (for example, resulting from the transportation).

If on the basis of the foregoing you decide to proceed to rejection, please contact:

- UPONOR GmbH

And if necessary,

- Kiwa Nederland B.V.

Carry out the storage, transport and processing in accordance with the provisions included in this technical-approval-with-product certificate and/or documents of the certificate holder.

