



## Technical-approval-with-product certificate **K109659/04**

Issued 2024-03-01

Replaces K109659/03

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### **Ecoflex flexible pre-insulated piping system for tap water**

#### STATEMENT BY KIWA

With this technical-approval-with-product certificate, issued in accordance with the Kiwa Regulations for Certification, Kiwa declares that legitimate confidence exists that the products supplied by

### **UPONOR GmbH**

as specified in this technical-approval-with-product certificate and marked with the Kiwa®-mark in the manner as indicated in this product certificate may, on delivery, be relied upon to comply with Kiwa evaluation guideline **BRL-K17401 part A** "Flexible piping systems intended for transport of hot and cold drinking water" dated 16-04-2004, inclusive amendment sheet dated 08-01-2020.

Within the framework of this technical-approval-with-product certificate Kiwa does not impose any inspections with regard to the production of other parts of the (product), nor the manufacturing of the (product) itself.

Ron Scheepers  
Kiwa

*Publication of this certificate is allowed.*

*Advice: consult [www.kiwa.nl](http://www.kiwa.nl) in order to ensure that this certificate is still valid.*

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Certification process  
consists of initial and  
regular assessment of:

- quality system
- product

## Ecoflex flexible pre-insulated piping system for tap water

**TECHNICAL SPECIFICATION****Subject**

Ecoflex flexible pre-insulated piping system for tap water

**Product characteristics**

The product complies to BRL K17401 Flexible piping systems intended for transport of hot and cold drinking water.

The system consists of:

- PE-Xa mono layer pipes manufactured by Uponor GmbH (certificate K109660);
- Metal Q&E fittings (20-32 mm) and Wipex fittings (25-110 mm) manufactured by Uponor GmbH (certificate K6434);
- PE-X Foam manufactured by Uponor GmbH (certificate K109662);
- VIP (Vacuum Insulated Panel) manufactured by Uponor GmbH (certificate K109661);
- Corrugated outer casing manufactured by Uponor GmbH (certificate K109663).

**Specification**

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

**Uponor PE-Xa pipes**

Nominal outside diameter (mm)	Wall thickness (mm)
20 <sup>1)</sup>	2,8
25 <sup>2)</sup>	3,5
32 <sup>2)</sup>	4,4
40 <sup>2)</sup>	5,5
50 <sup>2)</sup>	6,9
63 <sup>2)</sup>	8,6
75 <sup>2)</sup>	10,3
90 <sup>3)</sup>	12,3
110 <sup>3)</sup>	15,1

<sup>1)</sup> Only in twin pipe combination and with Q&E fitting

<sup>2)</sup> Single and twin pipe

<sup>3)</sup> Only single pipe

The nominal diameters of the outer casing are

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

Colour:

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

Remarks:

- The piping package may 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 3 of BRL 17401

**Fitness for contact with drinking water**

The pipes and fittings used in this system are approved on the basis of the requirements for hygienic aspects set in the "Regeling materialen en chemicaliën drink- en warm tapwatervoorziening" dated 01-07-2017; ("Materials and chemicals in the supply of drinking water and warm tap water Regulation"; published in the Government Gazette). The criteria for these hygienic aspects are recorded in the respective product certificates.

## Ecoflex flexible pre-insulated piping system for tap water



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### MARKING

The products shall be marked with the Kiwa-mark.

#### Pipes

The minimum required marking on the pipes shall be:






- **KIWA**  or  + DH1/ 10 bar;;
- material identification: PE-Xa;
- the build up of the pipe: PE-Xa;
- 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.

\*) for smaller diameters permitted by Kiwa.


#### Fittings

The minimum required marking on the fittings shall be:

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

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

The smallest packaging unit of the fittings are provided with at least the following information:


- **KIWA** 
- 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.

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

\*) for small fittings marking with only KK is permitted.

\*\*) only after approval by Kiwa.

The minimum required marking on the corrugated outer casing shall be:

- **KIWA**  + DH1/ 10 bar;
- certificate number of the accompanying technical approval-with-product certificate of the piping system
- manufacturer's name, trade name or system name;
- material indication inner pipe: PE-Xa;
- nominal outside diameter of the outer casing pipe in mm;
- number of inner pipes with nominal outside diameter and wall thickness in mm;
- production code.

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

### LOGISTICS

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

### APPLICATION AND USE

The medium pipes and fittings are designed for drinking water installations with a lifetime of 50 years at an operating temperature profile according to class DH1 of EN 253 or BRL K17401 and an allowable working pressure of maximum 10 bar.

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

## Ecoflex flexible pre-insulated piping system for tap water

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### **RECOMMENDATIONS FOR CUSTOMERS**

Check at the time of delivery whether:

- the supplier has delivered in accordance with the agreement;
- the mark and the marking method are correct;
- the products show no visible defects as a result of transport etc.

If you should reject a product on the basis of the above, please contact:

- UPONOR GmbH
- and, if necessary,
- Kiwa Nederland B.V.

Consult the supplier's processing guidelines for the proper storage, transport and processing methods.