



KOMO®
 Technical approval-with-product certificate
K104790/02



Issued 2021-08-15 Replaces K104790/01
 Valid until Indefinite Dated 2020-04-15
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STOUT PEX/Al/PEX SYSTEM

TEREM Ltd.

STATEMENT BY KIWA

This technical approval-with-product certificate on the basis of BRL 5610 Plastics piping systems of PE-X/Al intended for heating installations: radiator connections issued on 25 October 2016 by Kiwa, in accordance with the Kiwa Regulation for Certification.

The quality system and the product characteristics belonging to the STOUT are checked periodically and the performance of the STOUT 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 STOUT 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 STOUT with the KOMO®-mark in the manner as indicated in this technical approval-with-product certificate;
- the STOUT 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 STOUT or the processing of the STOUT.

Ron Scheepers
 Kiwa

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

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

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4742/00612

CERTIFICATE

Assessed is:

- Quality system
- Product
- Performance in the application
- Periodic control

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TECHNICAL SPECIFICATION**Subject**

STOUT PEX/Al/PEX SYSTEM

Product characteristics

The product complies to BRL 5610 Plastics piping systems of PE-X/Al intended for heating installations: radiator connections.

The system consists of:

- PE-X/Al/PE-X multilayer pipes
- Metal press fittings

Specification

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

Nominal outside Diameter (mm)	Wall thickness (mm)	Wall thickness Aluminium (mm)
16	2,0	0,2
20	2,0	0,3
26	3,0	0,4
32	3,0	0,45

Colour: outside: white
inside: naturel

Remarks: Metal press fittings with press clamp type "TH" are being used.

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 5 / 10 bar;
- material identification: PE-Xb;
- the build-up of the pipe; PE-Xb/Al/PE-Xb;
- 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.



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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.

Logistics

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

PROCESSING

The supplier shall provide installation instructions, approved by Kiwa. A reference to these instructions shall be made at or near the packaging. The instructions are published in the Dutch language and contains at least specific information with regard to storage, transport, processing temperature and construction of the joints.

So-called "combination boilers" are often applied in individual house heating systems. In such boilers, no double separation between drinking water and heating medium exists. A leak in the single separation may result in the heating medium coming into contact with drinking water. Because of this it is important that in case additives are added to the heating medium a Kiwa product certificate for these additives has been issued.

The heat emission to the floor is dependent on the thickness of the finishing coat and the mutual distance between the pipes. The preconditions have to be clearly described in the instructions.

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 heating installations: radiator connections and floor heating systems with a lifetime of 50 years at an operating temperature profile according to class 4/ 5 of NEN-ISO 10508 and an allowable working pressure of maximum 10 bar.

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

- TEREM Ltd. Trading as STOUT

And if necessary,

- Kiwa Nederland B.V.

Carry out the storage, transport and processing in accordance with the documents of the certificate holder.

