KOMO®



technical approval-with-product certificate

| Number | K90987/01 | Replaces | - | PRODUCTS RVA C 00 |
|-------------|------------|----------|--------|----------------------|
| Issued | 2016-02-15 | Dated | - | |
| Valid until | Indefinite | Page | 1 of 4 | |

ClouSet Flächensysteme

ClouSet Flächensysteme GmbH

STATEMENT BY KIWA

This technical approval -with-product certificate is issued by Kiwa on the basis of BRL 5607 "Plastics piping systems of PE-RT intended for heating installations: radiator connections" issued on 1 June 2008 by Kiwa, including amendment sheet issued on 7 June 2012, in accordance with the Kiwa regulations for product certification.

Kiwa declares that legitimate confidence exists that:

 the by the producer manufactured products comply with the technical specifications as laid down in this technical approval-with-product certificate provided that they have been marked with the KOMO[®]-mark in the manner as indicated in this technical approval-with-product certificate;

the with certified products composed ClouSet Flächensysteme provides the performances as described in the technical approval-with-product certificate, provided that:

the manufacturing of the ClouSet Flächensysteme intended for heating systems takes place according to the processing methods as laid down in this technical approval-withproduct certificate;

- the application conditions as described in this approval-with-product certificate are met. 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 ClouSet Flächensysteme, nor the manufacturing of the ClouSet Flächensysteme itself.

Luc Leroy Kiwa

The certificate is listed in the overview on the website of Stichting KOMO: www.komo.nl. Advice: consult www.kiwa.nl in order to ensure that this certificate is still valid.

Holder of Certificate ClouSet Flächensysteme GmbH Steinbeisstr. 27 70771 LEINFELDEN-ECHTERDINGEN Germany

T +49(0)711 79418800 F +49(0)711 794188080 E info@clouset.de I www.clouset.de Producer Enetec Plastics GmbH Erzbischof Bruno Straße 20 46509 XANTEN Germany

T +49(0)2801 9844070 E export@enetec.info I www.enetec.info

> Evaluated is: Quality system Product in application Periodic inspection

Kiwa Nederland B.V. Sir Winston Churchillaan 273 Postbus 70 2280 AB RIJSWIJK The Netherlands

Tel. +31 88 998 44 00 Fax +31 88 998 44 20 info@kiwa.nl



ClouSet Flächensysteme

PRODUCT SPECIFICATON

Plastics piping systems of PE-RT type 2 intended for intended for heating installations: radiator connections according BRL 5607 and/or to BRL 5602 "Plastics piping systems of PE-RT intended for underfloor heating".

The system consists of:

- 5 layer PE-RT type 2 pipes;
- Metal press and compression fittings;
- Corrugated protection pipes.

The pipe dimensions as indicated in the table below belong to this certificate.

| Class 4 / 6 bar | | Class 5 / 6 bar | | |
|-------------------------------------|------------------------|-------------------------------------|------------------------|--|
| Nominal outside diameter (mm) | Wall thickness (mm) | Nominal outside diameter (mm) | Wall thickness (mm) | |
| 14 | 1,25 | 10 | 1,3 | |
| 25 ¹⁾ | 2,3 | 12 | 2,0 | |
| | | 14 | 2,0 | |
| | | 16 | 2,0 | |
| | | 17 | 2,0 | |
| | | 18 | 2,0 | |
| | | 20 | 2,0 | |

¹⁾ only press fittings

Color:

inner layer of the pipe is: natural

outer layer of the pipe is: natural, red, blue, green, yellow, white, black, silver metal fittings: brass

protection pipe: color red, blue, black and white

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 4 or 5 / 6 bar;
- the manufacturer's name, trade name, system name or certificate number of accompanying technical approval (system)certificate;
- material identification: PE-RT type 2;
- the build up of the pipe; PE-RT /EVOH/PE-RT;
- nominal outside diameter and nominal wall thickness of the pipe in mm;
- production code.

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

Fittings

The minimum required marking on the fittings shall be:

- KOMO (if not possible KOMO only on the smallest packaging);
- nominal outside diameter of the corresponding pipe;
- production code.

Location of the marks: on every fitting.

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

ClouSet Flächensysteme

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

- KOMO® (or KOMO® word mark);
- the manufacturer's name, trade name, system name, logo or certificate number of the accompanying technical approval (system)certificate, according the marking of the pipe belonging to the piping system;
- material identification of the fitting body;
- 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 and indelible on every packaging.

Protection pipes

The minimum required marking on the protection pipes shall be:

- KOMO (KOMO® woordmerk);
- the manufacturer's name, trade name, certificate number of the protection pipe or the certificate number of the belonging technical approval (system) certificate.

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.

USAGE

The supplier shall provide installation instructions. A reference to these instructions shall be made at or near the packaging. The instructions must contain 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 technical approval Toxicological Aspects (ATA) 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 must be oxygen tight.
- 2. All joints must be leak tight and possess sufficient clamp force to resist external influences.
- 3. All system components must be designed for a lifetime of 50 years at an a operating temperature profile according to class 4 or 5 of ISO 10508 and a allowable working pressure of maximum 6 bar.

RECOMMENDATIONS FOR USERS

Check at the time of delivery whether:

- the products are in accordance with the agreement;
- the mark and marking method are correct;
- the product show no visible defects as a result of e.g. transport.

Examine by delivery if the under "processing" mentioned products satisfy to this mentioned specifications.

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

- ClouSet Flächensysteme GmbH
- and, if necessary:
- Kiwa Nederland B.V.

Consult the installation instructions of the producer for the correct way of storage, transport and processing of the products.

Take the application conditions mentioned under "performances" in consideration.

ClouSet Flächensysteme

CONSTRUCTION PRODUCTS REGULATIONS

If a construction product is subject to a European harmonised technical specification, the statements in this KOMO attestation including product certificate must not be used as a replacement for the CE marking on such construction product and/or for the associated obligatory Declaration of Performance.

LIST OF DOCUMENTS

* For the actual version of the standard see the latest version of the BRL or latest amendment sheet. 5607