



PRODUCT CERTIFICATE

The KE KELIT KELOX Multilayer Pipe & Fittings System



BUREAU
VERITAS

CERTIFICATE NO: CM70042

Version No: 1

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1 CERTIFICATE HOLDER DETAILS

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2 PRODUCT CERTIFICATION BODY

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The complaints process for this certificate
can be found here:

www.bureauveritas.com.au/your-feedback

3 DESCRIPTION OF BUILDING METHOD OR PRODUCT

Name of the product or method in New Zealand, including any brand names used. Description of what it is and the components that make up any system and its physical attributes including the materials and make-up of the product, where applicable.

Matters that should be taken into account in the use or application of the building method or product can be found in item 6. Conditions and Limitations of Use

KE KELIT KELOX Multilayer Pipe & Fittings System consists of multilayer solid wall PE-RT piping and compatible fittings.

KELOX Multilayer Pipe is manufactured from of transparent raised temperature resistant polyethylene (PE-RT) inner and white outer cores and bonded to a welded aluminium central core pipe.

KELOX multilayer is manufactured in the following dimensions (d): d14, 16, 20, 25, 32, 40, 50, 63 and 75mm.

KELOX ECO has a transparent inner layer PE-RT and white outer layer PE-RT with 4 thin blue stripes.

KELOX ECO piping is manufactured in the following dimensions (d): 16, 20, 25 mm.

KE KELIT KELOX Multilayer Pipe & Fittings System includes options with factory applied insulation (4, 9 and 13mm) and jackets.

This certification includes the use of the following ranges of fittings with these pipes: PROTEC, WINDOX-U and WINDOX-W.

The building method's or building product's catalogue or model identification number or numbers or other unique identifiers that might be used to identify the building product or building method

4 INTENDED USE OF BUILDING METHOD OR PRODUCT

Intended use of the building method or product as described in the product manual and other instructional materials.

A statement of the function or purpose of the building method or product.

The KELOX Multilayer Water Pipe and Fittings System is designed for the distribution of potable cold and hot water in buildings. Some models have an insulated outer sleeve to minimise heat conduction through the pipe wall. The system may be installed under concrete slabs on grade.

5 NEW ZEALAND BUILDING CODE PROVISIONS

The performance clauses of the New Zealand Building Code that are relevant to the intended use and with which the building method or product complies or contributes to (where used as part of a system).
e.g. Clause B2 – DURABILITY Performance B2.3.1

How the building method or product complies or contributes can be found in item 9. Basis for Certification. Any qualifications on the extent of that compliance can be found in item 6. Conditions and limitations of use.

B2 Durability: B2.3.1(a), B2.3.2

F2 Hazardous building materials: F2.3.1

G10 Piped services: G10.3.1 (contributes to) G10.3.3 (contributes to), G10.3.4 (contributes to),

G12 Water supplies: G12.3.2 (c) (contributes to), G12.3.7 (contributes to)

H1 Energy efficiency: H1.3.4(b, c) (KUC133 only)



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6 CONDITIONS AND LIMITATIONS OF USE

The building method or product's use is to be in accordance with the installation instructions and requirements against which the building method or product was assessed. Conditions or limitations of conformity for the performance requirements the building method or product is compliant with, including any requirements for people with the qualifications and skills to install or use the building method or product, any known or demonstrated situations where the building method or product should not be used. A statement as to whether there are any matters that should be taken into account in the use or application of the building product or building method and, if so, what those matters are.

NOTE: Together, items 3,4,5 and 6 define scope of use

1. The KELOX Multilayer Water Pipe and Fittings System is certified for use in:
 - a) Hot and Cold Drinking Water systems up to 70°C 10 bar (10 bar cold water, up to 60 °C/6 bar hot water for KELOX ECO)
 - b) Radiator Systems up to max 90°C/10 bar.
2. The design and installation of the KELOX Multilayer Water Pipe and Fittings System shall be in accordance with the KELOX Multilayer Handbook V5 2022.
3. The KELOX Multilayer Water Pipe and Fittings System shall be installed by suitably qualified persons trained and approved by Ke Kelit (NZ) Ltd.

7 HEALTH AND SAFETY INFORMATION

Health, safety, and well-being declarations associated with installation, maintenance, and use of the building method or product, and their specific editions and dates necessary to ensure the performance requirements of clauses F1 to F9 of the Building Code can be met.

The compliance with any manufacturer's installation instructions, maintenance, OH & S statements, MSDS's and other Health and Safety declarations will provide the necessary Health and Safety Information pertaining to the product.

8 SIGNATURES

Name and Signature of the Product Certification Body's (PCB) authorised representative and, where different, the person assigned by the PCB to make the certification decision

Sam Guindi
Product Certification Manager

For and on behalf of
Bureau Veritas Australia Pty Ltd



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9 BASIS FOR CERTIFICATION

How the performance requirements in the Building Code were met for each of the provisions. Where used as part of a system, the specific contribution to compliance.

- B2 Durability - By analysis and comparison with Verification Method B2/VM1
- F2 Hazardous building materials - By comparison with the performance requirements of Building Code clause F2.3.1
- G10 Piped services - By testing and comparison with Verification Method G10/VM1
- G12 Water supplies - By testing and comparison with Acceptable Solution G12/AS1
- H1 Energy efficiency - By analysis and comparison with Acceptable Solutions H1/AS1 and H1/AS2

10 SUPPORTING DOCUMENTATION FOR CERTIFICATION

Reference to any acceptable solutions, verification methods, New Zealand Standards, or other compliance pathways referenced against each individual performance requirement the building method or product is compliant with, and their specific version and date.
Reference to documents describing tests and evaluations and any other documents relied on for certification or used to prove compliance, including their full title, specific version and date.

1. Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability, Second edition (Amendment 12), 28 November 2019
2. Acceptable Solutions and Verification Methods Acceptable Solutions and Verification Methods For New Zealand Building Code Clause G12 Water Supplies, Third edition (Amendment 12), 27 June 2019
3. H1 Energy Efficiency, Acceptable Solution H1/AS1, Energy efficiency for all housing, and buildings up to 300 m², Fifth edition (Amendment 1), 4 August 2022
4. H1 Energy Efficiency, Acceptable Solution H1/AS2, Energy efficiency for buildings greater than 300 m², First edition (Amendment 1), 4 August 2022
5. OWGV Certificate W1.842 Drinking water indoor installation for KELOX ECO, 17 November 2020
6. IAPMO R&T Oceana Certificate No. WM-022381 Watermark Certificate of Conformity, 13 February 2019
7. JANA Report Chlorine Resistance Evaluation of Dowlex 2388 Piping, 26 January 2015
8. IMA Test Report No. B581/13 Dezincification Resistance of KELOX PROtec, November 2013
9. WRc-NSF Test Report No. MAT/ASN 032J to 036J Testing to AS/NZS4020:2005 Products For Use in Contact With Drinking Water, 1 February 2012
10. AMS Laboratories Report No. 1420261 AS/NZS4020:2005 Compliance Testing Certificate of Analysis, 28 January 2015
11. KELOX Multilayer Handbook V5, 2022

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SUPPORTING INFORMATION

11 SUPPORTING INFORMATION ABOUT DESCRIPTION (OPTIONAL)

Any supporting information for section 3

The KE KELIT KELOX Multilayer Pipe & Fittings System includes the following components:

KELOX pipe

- KELOX multilayer composite pipe (KM100 and KM110)
- KELOX Plus pipe KM134 with factory-applied 4 mm closed-cell soft foam insulation and jacket made of viscoplastic PE film (blue)
- KELOX Plus pipe KM130 with factory-applied 9mm closed-cell soft foam insulation (red) and jacket made of viscoplastic PE film (red)
- KELOX Plus pipe KM136 with factory-applied 6mm closed-cell soft foam insulation (red) and jacket made of viscoplastic PE film (red)
- KELOX Plus pipe KM133 with factory-applied 13mm closed-cell soft foam insulation and jacket made of viscoplastic PE film (orange)
- KELOX Pro pipe KM140 with factory-applied sleeve consisting of corrugated, water-impermeable PE-HD sleeve tube (blue)
- KELOX Pro plus pipe KM144 with factory-applied sleeve consisting of corrugated, water-impermeable PE-HD sleeve tube (blue) and a 4 mm closed-cell soft foam insulation and jacket made of viscoplastic PE film

KELOX ECO pipe

- KELOX ECO multilayer composite pipe (KUC100)
- KELOX ECOPlus pipe KUC134 with factory-applied 4 mm closed-cell soft foam insulation and jacket made of viscoplastic PE film (orange)
- KELOX ECOPlus pipe KUC130 with factory-applied 9mm closed-cell soft foam insulation (red) and jacket made of viscoplastic PE film (orange)

PROTEC, WINDOX-U and WINDOX-W ranges of fittings

12 SUPPORTING INFORMATION ABOUT INTENDED USE (OPTIONAL)

Any supporting information for section 4

N/A

13 SUPPORTING INFORMATION ABOUT CONDITIONS AND LIMITATIONS OF USE (OPTIONAL)

Any supporting information for section 6

N/A