

## Kiwa Watermark Certification and Testing for Plastics Piping Systems Outside Buildings



**Water for drinking, cooking, preparing food or other household purposes comes to us through a pipe system that must be reliable and safe for our health. Testing and Kiwa Watermark certification guarantees high quality of plastics piping systems outside buildings for drinking water distribution.**

### **Who is Kiwa Watermark certification and testing for?**

Certification and testing for plastics piping systems outside buildings is relevant for water companies, producers, contractors for infrastructure and anyone working for provinces and municipalities responsible for drinking water quality.

### **About Kiwa Watermark product certification and testing**

Kiwa Watermark quality mark certified plastics piping systems outside buildings guarantee compliance with the requirements of Dutch and international standards for products used for drinking water distribution. In addition, the products meet the hygienic requirements, as set by the Dutch government. Only products that meet all requirements - including an agreed constant quality level - can be certified by Kiwa with the Kiwa Watermark. The guaranteed lifetime of the Kiwa Watermark certified pipes and fittings used outside buildings for transport of drinking water is at least 50 years.

### **Kiwa Watermark certification evaluation guidelines**

#### **Plastic brackets for drinking water pipes made of copper or plastic (BRL-K506)**

Kiwa Watermark certification under Kiwa evaluation guideline BRLK506 applies to products intended to be used for the fastening of cold and hot water pipes of copper and plastic with standard outside diameters of 10 to 54 mm.

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The evaluation guideline BRL K506 is a certification scheme for the Kiwa product certificate for plastic brackets for copper or plastic drinking water pipes.

[Download BRL K506 Evaluation Guideline](#) (Dutch)

### **PE fittings (BRL-K522)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL522 applies to products intended to be used as products in PE piping systems (BRL-K17105) or PVC-U piping systems (BRL-K17301) outdoors for the transport of drinking water. For the relationship of temperature and pressure, the requirements in the mentioned BRLs apply. Diameter range is from 63 mm to 400 mm. The evaluation guideline BRL K522 is a certification scheme for the Kiwa product certificate for PE fittings.

[Download BRL-K522 Evaluation Guideline](#) (Dutch)

### **PE piping systems with an aluminium barrier layer for drinking water in polluted soil (BRL-K17101)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17101 applies to products intended to be applied in piping systems for the conveyance of water for human consumption (drinking water, tap water) and raw water under pressure in contaminated soil.

The evaluation guideline determines the permeation resistance of piping systems with barrier properties (fitness for purpose) and cannot be used to determine health risks. In the Netherlands, health risks are based on exceeding the Maximum Permissible Risk level (MTR human) through all possible exposure routes, among others consumption and use of drinking water after permeation of contaminants through drinking water pipelines. Details can be found in the public RVM-report 2016-01071. Another issue is that drinking water regulations differ per country which favours the approach to determine the permeation properties of the piping system. The evaluation guideline BRL K17101 is a certification scheme for the Kiwa technical approval with product certificate for class II and class III polyethylene piping systems with an aluminium barrier layer for the transport of drinking water in polluted soil.

[Download BRL-K17101 Evaluation Guideline](#)

### **PE piping systems with a plastic barrier layer for drinking water in polluted soil (BRL-K17102)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17102 applies to products intended to be applied in piping systems for the conveyance of water for human consumption (drinking water), and raw water under pressure in polluted soil.

The evaluation guideline determines the permeation resistance of piping systems with barrier properties (fitness for purpose) and cannot be used to determine health risks. In the Netherlands, health risks are based on exceeding the Maximum permissible risk level (MTRhuman) through all possible exposure routes, among others consumption and use of drinking water after permeation of contaminants through drinking water pipelines. Details can be found in the public RVM-report 2016-01071.

Another issue is that drinking water regulations differ per country which favours the approach to determine the permeation properties of the piping system.

The evaluation guideline BRL K17102 is a certification scheme for the Kiwa technical approval with product certificate for class II and class III polyethylene piping systems with a plastic barrier layer for the transport of drinking water in polluted soil.

[Download BRL-K17102 Evaluation Guideline](#)

### **Glass fibre reinforced epoxy piping systems intended for the transport of drinking water & raw water (BRL-K17104)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17104 applies to products intended to be used for the transport of drinking water and raw water at temperatures up to 50°C. The products with nominal size from DN 25 to DN 3000 can be used in

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under and above ground applications. The pipes and fittings are provided with tensile resistant and non-tensile resistant joints with or without rubber sealing elements.

The evaluation guideline BRL K17104 is a certification scheme for the Kiwa (technical approval-with) product certificate for glass fibre reinforced epoxy piping systems with filament wound pipes intended for the transport of drinking water and raw water.

[Download BRL-K17104 Evaluation Guideline](#)

### **PE piping systems for the transport of drinking water (BRL-K17105)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17105 applies to PE (co extruded) pipes and fittings intended to be applied in piping systems for the transport of drinking water and raw water with a maximum temperature of 40°C in accordance with NEN-EN12201 series.

The evaluation guideline BRL K17105 is a certification scheme for the Kiwa product certificate for plastics piping systems of polyethylene for the transport of drinking water and raw water.

[Download BRL-K17105 Evaluation Guideline](#)

### **Piping systems for PVC for the transport of drinking water and raw water (BRL-K17301)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17301 applies to products intended to be applied in piping systems for the transport of drinking water till a temperature of 20°C which are not exposed to sunlight.

This guideline also applies to unplasticized polyvinylchloride (PVC-U) and oriented polyvinylchloride (PVC-O) piping systems for the transport of drinking water and raw water heated till a temperature of 45°C.

The evaluation guideline BRL K17301 is a certification scheme for the Kiwa product certificate for piping systems of PVC for the transport of drinking water and raw water.

[Download BRL-K17301 Evaluation Guideline](#)

### **District heating: flexible piping systems for transport of warm drinking water (BRL K17401)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17401 applies to products intended to be used in connections between the district heating distribution system and the separate house (blocks) for the supply of warm drinking water, at a design pressure (= maximum working pressure) of 1,1 MPa (11 bar absolute or 10 bar overpressure) or 0,9 MPa (9 bar absolute or 8 bar overpressure).

The evaluation guideline BRL K17401 is a national evaluation guideline for the Kiwa technical approval-with-product certificate for District heating: flexible piping systems with plastic medium pipe for transport of warm drinking water.

[Download BRL-K17401 Evaluation Guideline](#)

### **GRP Polyester Piping systems for water (BRL-K17605)**

Kiwa Watermark certification under Kiwa evaluation guideline BRL17605 applies to products intended to be used for underground piping systems and its components made from glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) intended to be used for water supply (drinking or raw), with or without pressure. In a pipework system, pipes and fittings of different nominal pressure and stiffness ratings may be used together.

The evaluation guideline is applicable to pipes, fittings and their joints (flexible or rigid) of nominal diameters from DN 100 to DN 4000, which are intended to be used for the conveyance of tap water at temperatures up to 50°C.

In this application, the products are not intended for use under continuously varying load. With a continuously varying load is meant here cycling loads with a frequency of at least 1 cycle per minute varying between two load levels.

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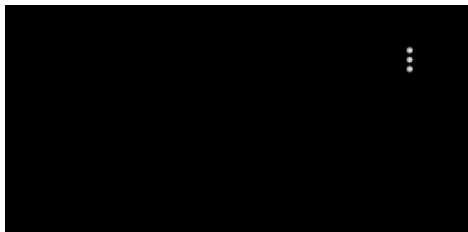


The evaluation guideline BRL K17605 is a certification scheme for the Kiwa technical approval with product certificate for plastics piping systems for water supply with or without pressure –glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP).

[Download BRL-K17605 Evaluation Guideline](#)

Contact our certification experts in this area to study your question and work with you to find the right solution to obtain the Kiwa Watermark quality mark.

### **Kiwa Watermark certification process**



### **Find certified companies and organizations**

Search company name, city, standard, BRL and/or certificate number with [this finder on the Kiwa Netherlands website](#).

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