

**BRL-K635/04**

2017-05-12

# Evaluation Guideline

for the Kiwa product certificate for  
flow rate limiters



**Trust  
Quality  
Progress**

# Preface

This evaluation guideline has been accepted by the Kiwa Board of Experts Watercycle (CWK), in which all relevant parties in the field of flow rate limiters are represented. The Board of Experts also supervises the certification activities and where necessary requires the evaluation guideline to be revised. All references to Board of Experts in this evaluation guideline pertain to the above mentioned Board of Experts.

This evaluation guideline will be used by Kiwa in conjunction with the Kiwa Regulations for Product Certification.

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The use of this evaluation guideline by third parties, for any purpose whatsoever, is only allowed after a written agreement is made with Kiwa to this end.

## Validation

This evaluation guideline has been validated by Kiwa on 12 May 2017.

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# 1 Introduction

## 1.1 General

This evaluation guideline includes all relevant requirements which are adhered to by Kiwa as the basis for the issue and maintenance of a certificate for flow rate limiters.

This evaluation guideline replaces BRL-K635/03, dated 7 March 2003.

The quality declarations issued and based on that guideline will lose their validity at least on April 2022.

For the performance of its certification work, Kiwa is bound to the requirements as included in NEN-EN-ISO/IEC 17065 "Conformity assessment - Requirements for bodies certifying products, processes and services".

## 1.2 Field of application / scope

Flow rate limiters are designed to be used for limiting and maintaining a constant flow rate, independent from the working pressure in the drinking water installations. They can be used in drinking water installations with working pressures between 50 and 1000 kPa and a water temperature with a maximum of 65°C.

Using the products in water installations with an occasional water temperature up to 90°C is possible. However, this may influence the durability and performance of the product.

The recommended limits for correct operation of the products are a dynamic pressure between 100 kPa and 500 kPa and a water temperature of maximum 65°C.

Flow rate limiters can be installed at:

- draw off points, possible in combination with a flow rate regulator,
- in hand showers and shower heads,
- in the supply of appliances (inline),
- in heaters (special application).

Flow rate limiters can be distinguished in two classes, based on their accuracy, being:

- Class 1 - with an 5% accuracy,
- Class 2 - with an 15% accuracy.

### Remark

Only Class 1 flow rate limiters may be indicated as "pressure independent".  
Class 1 flow rate limiters will be indicated as such in the Kiwa product certificate.

## 1.3 Acceptance of test reports provided by the supplier

If the supplier provides reports from test institutions or laboratories to prove that the products meet the requirements of this evaluation guideline, the supplier shall prove that these reports have been drawn up by an institution that complies with the applicable accreditation standards, namely:

- NEN-EN-ISO/IEC 17020 for inspection bodies;
- NEN-EN-ISO/IEC 17021 for certification bodies certifying systems;
- NEN-EN-ISO/IEC 17024 for certification bodies certifying persons;
- NEN-EN-ISO/IEC 17025 for laboratories;
- NEN-EN-ISO/IEC 17065 for certification bodies certifying products.

### Remark:

This requirement is considered to be fulfilled when a certificate of accreditation can be shown, issued either by the Board of Accreditation (RvA) or by one of the institutions with which an agreement of mutual acceptance has been concluded by the RvA. The accreditation shall

refer to the examinations as required in this evaluation guideline. When no certificate of accreditation can be shown, Kiwa shall verify whether the accreditation standard is fulfilled.

#### **1.4 Quality declaration**

The quality declaration to be issued by Kiwa is described as a Kiwa product certificate. A model of the certificate to be issued on the basis of this evaluation guideline has been included for information as Annex.

## 2 Terms and definitions

### 2.1 Definitions

In this evaluation guideline, the following terms and definitions apply:

- **Board of Experts:** the Board of Experts “Water Cycle” (CWK).
- **Certification mark:** a protected trademark of which the authorization of the use is granted by Kiwa, to the supplier whose products can be considered to comply on delivery with the applicable requirements
- **Drinking water:** water intended or partly intended for drinking, cooking or food preparation or other domestic purposes, but does not include hot water, and is made available by pipeline to consumers or other customers.
- **Drinking water installation:** an installation direct or in-direct connected to the public drinking water distribution network of a drinking water company (source Dutch drinking water act);
- **Evaluation Guideline (BRL):** the agreements made within the Board of Experts on the subject of certification.
- **Hot tap water:** water intended or partly intended for drinking, cooking or food preparation or other domestic purposes, which is heated before it is made available for those applications.
- **Installation:** configuration consisting the pipe work, fittings and appliances;
- **Inspection tests:** tests carried out after the certificate has been granted in order to ascertain whether the certified products continue to meet the requirements recorded in the evaluation guideline.
- **IQC scheme (IQCS):** a description of the quality inspections carried out by the supplier as part of his quality system.
- **Pre-certification tests:** tests in order to ascertain that all the requirements recorded in the evaluation guideline are met.
- **Private Label Certificate:** A certificate that only pertains to products that are also included in the certificate of a supplier that has been certified by Kiwa, the only difference being that the products and product information of the private label holder bear a brand name that belongs to the private label holder.
- **Product certificate:** a document in which Kiwa declares that a product may, on delivery, be deemed to comply with the product specification recorded in the product certificate.
- **Product requirements:** requirements made specific by means of measures or figures, focussing on (identifiable) characteristics of products and containing a limiting value to be achieved, which can be calculated or measured in an unequivocal manner.
- **Supplier:** the party that is responsible for ensuring that the products meet and continue to meet the requirements on which the certification is based.
- **Working pressure ( $p_w$ ):** the highest pressure occurring in the drinking water appliance or in the parts of it, under normal circumstances.

- **Effective pressure** ( $P_e$ ): the difference between the absolute pressure ( $P$ ) and the surrounding pressure ( $P_{amb}$ ). Expressed as a formula:  $P_e = P - P_{amb}$
- **Operating pressure:** the pressure ( $P_a$ ) at which despite an increasing water pressure, the flow rate is maintained at a constant value.
- **Using pressure:** the pressure at the connection of the appliance during operation.



## **3 Procedure for granting a product certificate**

### **3.1 Pre-certification tests**

The pre-certification tests to be performed are based on the (product) requirements as contained in this evaluation guideline, including the test methods, and comprises the following:

- type testing to determine whether the products comply with the product and/or functional requirements;
- production process assessment;
- assessment of the quality system and the IQC-scheme;
- assessment on the presence and functioning of the remaining procedures.

### **3.2 Granting the product certificate**

After finishing the pre-certification tests, the results are presented to the Decision maker (see 9.2) deciding on granting the certificate. This person evaluates the results and decides whether the certificate can be granted or if additional data and/or tests are necessary.

# 4 Requirements

## 4.1 General

This chapter contains the requirements that flow rate limiters have to fulfil.

## 4.2 Regulatory requirements

### 4.2.1 Requirements to avoid deterioration of the quality of drinking water

The requirements in this chapter are public law requirements.

To prevent harmful effects on the quality of drinking water, the following government imposed provisions apply.

Products and materials which (may) come into contact with drinking water or warm tap water, shall not release substances in quantities which can be harmful to the health of the consumer, or negatively affect the quality of the drinking water. Therefore, the products or materials shall meet toxicological, microbiological and organoleptic requirements as laid down in the currently applicable "Ministerial Regulation materials and chemicals drinking water and warm tap water supply", (published in the Government Gazette). Consequently, the procedure for obtaining a recognised quality declaration, as specified in the currently effective Regulation, has to be concluded with positive results.

Products and materials with a quality declaration<sup>1</sup>, e.g. issued by a foreign certification institute, are allowed to be used in the Netherlands, provided that the Minister has declared this quality declaration equivalent to the quality declaration as meant in the Regulation.

## 4.3 Product requirements

### 4.3.1 Chemical and mechanical requirements

#### 4.3.1.1 Corrosion resistance

All materials shall be corrosion resistant or be protected against corrosion. The materials used may not have an adverse effect on each other to generate contact corrosion.

#### 4.3.1.2 Metallic protection layers

Metallic anticorrosive protection layers shall comply with the requirements of EN 248.

#### 4.3.1.3 Plastic coatings

The thickness of the layer, as applied, shall be at least 25µm. After a test according to 5.1 the coating shall meet;

- EN 248, article 7.1.1. in relation to the corrosion resistance,
- ISO 2409, table 1, class 0 or 1 for the adhesion.

### 4.3.2 Construction and design

#### 4.3.2.1 Connection ends (for flow rate limiters to be connected to appliances)

Flow rate limiters shall have connection ends in compliance with:

- screw thread according to ISO228 and a maximum dimensions G¾ for male thread and G1 for female thread. The length of the thread shall comply with table 1,
- screw thread for connecting to tap outlets with dimensions according EN246,
- press-, compression- or push-in joints for metal or plastic pipes, in compliance with the Kiwa evaluation guideline BRL-K640

The flow rate limiters can be fitted with similar or different en joints.

In Table 1 the threads to be used and the external diameters of the pipes for the fittings are specified.

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<sup>1</sup> A quality declaration issued by an independent certification institute in another member state of the European Community or another state party to the agreement to the European Economic Area, is equivalent to a recognized quality declaration, to the extent that, to the judgment of the Minister of the first mentioned quality declaration, is fulfilled the at least equivalent requirements as meant in the Regulation materials and chemicals drinking water- and warm tap water supply.

Table 1 – dimensions

Thread	length female thread (mm)		male thread (mm)	
	thread length	total length	length (min. – max.)	runout/undercut (min. – max.)
G $\frac{1}{8}$	4.5	5.6	4.5 – 6.5	0.9 – 1.8
G $\frac{1}{4}$	7.0	8.0	6.0 – 7.5	1.3 – 2.6
G $\frac{3}{8}$	7.0	8.5	7.0 – 8.5	1.3 – 2.6
G $\frac{1}{2}$	9.0	10.5	7.0 – 9.0	1.8 – 3.6
G $\frac{3}{4}$	10.0	12.0	8.5 - 10	1.8 – 3.6
G1	11.5	13.5	-	-

4.3.2.2 *Connection ends (for flow rate limiters to be build in appliances)*

The dimensions and conditions for building in the limiters shall be specified by the manufacturers of the flow rate limiters.

**4.3.3 Functional requirements**

4.3.3.1 *Operating pressure*

The manufacturer shall declare the value of the operating pressure. This pressure shall not exceed 200kPa and shall be verified when tested according clause 5.2.

4.3.3.2 *Flow rate*

The flow rate of the flow rate limiter shall be determined according to clause 5.2, in the range between 50kPa and 500kPa measured with 25kPa intervals to a pressure of 150kPa and with 50kPa intervals to a pressure of 500kPa.

Inline flow rate limiters shall be tested with a designated outlet configuration.

Integrated flow rate limiters to be used as parts of draw off points, e.g. in flow rate regulators or hand showers, shall be tested with a free outlet.

The flow rate at a pressure of 300kPa shall be

- for class 1 – between 95% and 105% of the claimed nominal flow rate,
- for class 2 – between 85% and 115% of the claimed nominal flow rate.

The flow rate at a pressure of 100kPa shall be at least 4 l/min.

When tested according to clause 5.2, from the operating pressure to the maximum pressure of 500kPa, the flow rate shall not change more then:

- for class 1 – 5%,
- for class 2 – 15%.

At the same time, the values measured at similar pressures shall not differ more than 5%.

4.3.3.3 *Classes*

Flow rate limiters are classified by their nominal flow rate in litres per minute. This nominal flow rate is determined by means of the average value of the results obtained from the tests according to clause 5.3. The measured nominal flow rate shall not deviate more then

- for class 1 – 5% of the claimed nominal flow rate,
- for class 2 – 15% of the claimed nominal flow rate.

When tested according to clause 5.3, the measured flow rate of at least 4 out of 5 limiters shall be within 5% of the average value.

4.3.3.4 *Durability*

After being tested according to clause 5.4, the flow rate limiter shall comply with clause 4.3.3.2. At the same time the values as measured shall not deviate more than 5% for class 1 and 10% for class 2 of the values obtained from the initial flow rate measurement.

**4.3.3.5** *Resistance against high pressures and high temperatures*

Flow rate limiters shall be resistant against pressures up to 1000kPa and temperatures up to 90°C. This shall be determined according to clause 5.5. After being tested to clause 5.5 the values as measured shall not differ more than 5% for class 1 and 10% for class 2, of the values obtained from the initial flow rate measurement.

**4.3.3.6** *Integrated flow rate limiters*

Products, such as flow rate regulators, hand showers and shower heads, of which the flow rate limiters are an integral part, shall also comply with the requirements valid for these products

# 5 Test methods

## 5.1 Determination of the adherence and the durability of plastic coatings

### 5.1.1 Test installation and appliances

For the determination of the adherence and the durability of the plastic coating, the test pieces first have to be conditioned in a bath of which the water is automatically maintained at the required temperature. The appliances used for the determination of the adherence shall be according to NEN-EN-ISO 4624:2003

### 5.1.2 Test piece

A number of products that ensure a surface to be tested of at least 10.000 mm<sup>2</sup>.

### 5.1.3 Test requirements

During the conditioning of the test pieces:

- the water in the bath shall be  $90 \pm 3^{\circ}\text{C}$ :
- the ambient temperature shall be  $20 \pm 10^{\circ}\text{C}$ .

### 5.1.4 Procedure

- a. Put the test pieces in the water bath for 1 hour.
- b. Cool the test pieces down to ambient temperature.
- c. Determine the adherence of one test piece according to NEN-EN-ISO 4624:2003.
- d. determine for the remaining test pieces whether they comply with NEN-EN 248:

## 5.2 Determination of flow rate and operating pressure

### 5.2.1 Test installation

For the determination of the flow rate, the flow rate limiter shall be included in an installation capable of delivering hot and cold water with a pressure of maximum 500kPa and a flow rate of at least 1.5 times the nominal flow rate of the flow rate limiter under test.

For hot water, water shall be used with a temperature of  $(65 +2; -5)^{\circ}\text{C}$ , while for cold water, water shall be used with a maximum temperature of  $25^{\circ}\text{C}$ .

The nominal diameter of the pipe work shall be at least the same as that of flow rate limiter under test. The pressure shall be measured 200mm before the flow rate limiter under test.

For in-line flow rate limiters an outlet configuration applies. This configuration is made of copper pipe according to EN1057, half hard with a length of  $1250 \pm 50\text{mm}$  and of the same nominal bore as the flow rate limiter. Only bends of radius  $R \geq 4$  the bore of the pipe are permitted. At the end of the pipework a standard hydraulic resistance class B, as mentioned in EN200:2008, is attached.

### 5.2.2 Procedure

- a. Determine the flow rate starting from a minimum pressure of 50kPa, increasing with 25kPa intervals to a pressure of 150kPa and then with 50kPa intervals to a maximum pressure of 500kPa. After increasing the pressure, a stabilization time of  $(30 \pm 2)$  seconds will be allowed before the flow rate is measured.
- b. Determine the flow rate at the same pressures, but this time decreasing from 500kPa. After decreasing the pressure, a stabilization time of  $(30 \pm 2)$  seconds will be allowed before the flow rate is measured.
- c. Repeat a. and b.,
- d. The average obtained at each pressure is being considered as the flow rate at that pressure,
- e. Determine
  - the flow rate at 100kPa and 300kPa,
  - the operating pressure of the limiter,
  - the difference of the measured values at the various pressures.

### **5.3 Classification**

#### **5.3.1 Test piece**

For the test five new flow rate limiters are to be used.

#### **5.3.2 Test installation**

The test is to be carried out with the installation as described in 5.2.1.

#### **5.3.3 Procedure**

- a. Measure the flow rate of the 5 limiters at a pressure equal to the operating pressure,
- b. Determine the average flow rate of these 5 limiters.

### **5.4 Determination of the durability**

#### **5.4.1 Test installation**

The test is to be carried out with the installation as described in 5.2.1.

#### **5.4.2 Procedure**

- a. Determine the flow rate according to 5.2.2.
- b. Carry out 70.000 cycles, using hot and cold water alternately for periods of  $(15 \pm 1)$  min each, where each cycle consists of:
  - open the test installation within 2 seconds and flow the limiter for a period of  $(15 \pm 2)$  seconds,
  - close the installation within 2 seconds and wait for  $(5 \pm 1)$  seconds
- c. Measure the flow rate according to 5.2.2.

### **5.5 Determination resistance against high pressures and high temperatures**

#### **5.5.1 Test installation**

The test installation shall be according to 5.2.1, but capable to flow the limiters with water with a pressure of 1000kPa and a water temperature of  $(90 \pm 2)^\circ\text{C}$ .

#### **5.5.2 Procedure**

- a. Carry out 4 cycles, where each cycle consists of:
  - open the installation and flow the limiter with water  $(90 \pm 2)^\circ\text{C}$  and a pressure of  $(500 \pm 20)$  kPa for  $(15 \pm 1)$  minutes,
  - close the installation within 3 seconds
  - open the installation and flow the limiter with water  $(20 \pm 2)^\circ\text{C}$  and a pressure of  $(1000 \pm 20)$ kPa for  $(15 \pm 1)$  minutes,
  - close the installation within 3 seconds
- b. Measure the flow rate according to 5.2.2.

## 6 Marking

### 6.1 General



The housing of the flow rate limiters shall be marked clearly visible and indelible with the following:

- name or logo of the manufacturer,
- class indication
- nominal flow rate (in l/min)

At the same time flow rate limiters, with the exception of those to be used in heaters and/or making an integral part of a product, shall be furnished with an indication for the flow direction.

The packaging of flow rate limiters which are to be delivered directly to the consumer shall indicate the operating pressure. Eventually also the deflection of the flow rate in % and litres per minute can be indicated on the packaging<sup>1</sup>

### 6.2 Certification mark

After concluding a Kiwa certification agreement, the certified products shall be indelible marked with the certification mark "KIWA " or for small products .

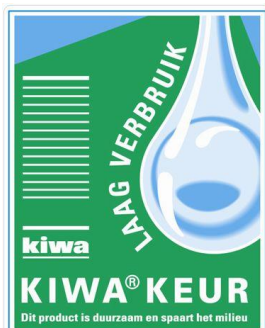
The packaging may be provided with the following mark



### 6.3 Low water consumption indication

Flow rate limiters with a nominal flow rate between 4.0 l/min and 6.0 l/min, may be indicated with the Kiwa "Low water consumption" mark.

The indication "Low water consumption" may be applied to the package.



<sup>1</sup> Data as indicated shall, in addition to the nominal flow rate, be indicated in the product certificate.

# 7 Requirements in respect of the quality system

This chapter contains the requirements which have to be met by the supplier's quality system.

## 7.1 Manager of the quality system

Within the supplier's organizational structure, an employee who will be in charge of managing the supplier's quality system must have been appointed.

## 7.2 Internal quality control/quality plan

The supplier shall have an internal quality control scheme (IQC scheme) which is applied by him.

The following must be demonstrably recorded in this IQC scheme:

- which aspects are checked by the supplier;
- according to what methods such inspections are carried out;
- how often these inspections are carried out;
- in what way the inspection results are recorded and kept.

This IQC scheme should at least be an equivalent derivative of the model IQC scheme as shown in the Annex.

## 7.3 Control of test and measuring equipment

The supplier shall verify the availability of necessary test and measuring equipment for demonstrating product conformity with the requirements in this evaluation guideline.

When required the equipment shall be kept calibrated ( e.g recalibration at interval).

The status of actual calibration of each equipment shall be demonstrated by traceability through an unique ID.

The supplier must keep records of the calibration results.

The supplier shall review the validity of measuring data when it is established at calibration that the equipment is not suitable anymore.

## 7.4 Procedures and working instructions

The supplier shall be able to submit the following:

- procedures for:
  - dealing with products showing deviations;
  - corrective actions to be taken if non-conformities are found;
  - dealing with complaints about products and/or services delivered;
- the working instructions and inspection forms used.



## 8 Summary of tests and inspections

This chapter contains a summary of the following tests and inspections to be carried out in the event of certification:

- pre-certification tests;
- inspection test;
- inspection of the quality system of the supplier.

### 8.1 Test matrix

Description of requirement	Article no. of BRL-K635	Tests within the scope of:	
		Pre-certification	Inspection by Kiwa after granting of certificate a,b)
<b>Material</b>			
Requirements to avoid deterioration of the quality of the drinking water	4.2.1	X	X
Chemical and mechanical requirements	4.3.1	X	X
<b>Product requirements</b>			
Construction and design	4.3.2	X	X
Operating pressure	4.3.3.1	X	X
Flow rate	4.3.3.2	X	X
Classes	4.3.3.3	X	
Durability	4.3.3.4	X	
Resistance against high pressures and high temperatures	4.3.3.5	X	X
Integrated flow rate limiters	4.3.3.6	X	
<b>Marking</b>			
General	6.1	X	X
Certification mark	6.2	X	X
Low water consumption indication	6.3	X	

a) In case the product or production process changes significantly, it must be determined whether the performance requirements are still met.

b) All product characteristics that can be determined within the visiting time (maximum 1 day) are determined by the inspector or by the supplier in the presence of the inspector. In case this is not possible, an agreement will be made between the certification body and the supplier about how the inspection will take place. The frequency of inspection visits is defined in chapter 9.6 of this evaluation guideline.

### 8.2 Inspection of the quality system of the supplier

The quality system of the supplier will be checked by Kiwa on the basis of the IQC scheme. The inspection contains at least those aspects mentioned in the Kiwa Regulations for Product Certification.

# 9 Agreements on the implementation of certification

## 9.1 General

Beside the requirements included in these evaluation guidelines, the general rules for certification as included in the Kiwa Regulations for Product Certification also apply. These rules are in particular:

- the general rules for conducting the pre-certification tests, in particular:
  - the way suppliers are to be informed about how an application is being handled;
  - how the test are conducted;
  - the decision to be taken as a result of the pre-certification tests.
- the general rules for conducting inspections and the aspects to be audited,
- the measures to be taken by Kiwa in case of Non-Conformities,
- the measures taken by Kiwa in case of improper use of Certificates, Certification Marks, Pictograms and Logos,
- terms for termination of the certificate,
- the possibility to lodge an appeal against decisions of measures taken by Kiwa.

## 9.2 Certification staff

The staff involved in the certification may be sub-divided into:

- Certification assessor (**CAS**): in charge of carrying out the pre-certification tests and assessing the inspectors' reports;
- Site assessor (**SAS**): in charge of carrying out external inspections at the supplier's works;
- Decision maker (**DM**): in charge of taking decisions in connection with the pre-certification tests carried out, continuing the certification in connection with the inspections carried out and taking decisions on the need to take corrective actions.

### 9.2.1 Qualification requirements

The qualification requirements consist of:

- qualification requirements for personnel of a certification body which satisfies the requirements EN ISO / IEC 17065, performing certification activities
- qualification requirements for personnel of a certification body performing certification activities set by the Board of Experts for the subject matter of this evaluation guideline

Education and experience of the concerning certification personnel shall be recorded demonstrably.

Basic requirements	Evaluation criteria
Knowledge of company processes Requirements for conducting professional audits on products, processes, services, installations, design and management systems.	<i>Relevant experience: in the field</i> <b>SAS, CAS</b> : 1 year <b>DM</b> : 5 years inclusive 1 year with respect to certification Relevant technical knowledge and experience on the level of: <b>SAS</b> : High school <b>CAS, DM</b> : Bachelor
Competence for execution of site assessments. Adequate communication skills (e.g. reports, presentation skills and interviewing technique).	<b>SAS</b> : Kiwa Audit training or similar and 4 site assessments including 1 autonomic under review.
Execution of initial examination	<b>CAS</b> : 3 initial audits under review.
Conducting review	<b>CAS</b> : conducting 3 reviews

Technical competences	Evaluation Criteria
Education	<b>General:</b> Education in one of the following technical areas: <ul style="list-style-type: none"> <li>• Civil Engineering;</li> <li>• Engineering.</li> </ul>
Testing skills	<b>General:</b> <ul style="list-style-type: none"> <li>• 1 week laboratory training (general and scheme specific) including measuring techniques and performing tests under supervision ;</li> <li>• Conducting tests (per scheme).</li> </ul>
Experience - specific	<b>CAS</b> <ul style="list-style-type: none"> <li>• 3 complete applications (excluding the initial assessment of the production site) under the direction of the <b>PM</b></li> <li>• 1 complete application self-reliant (to be evaluated by <b>PM</b>)</li> <li>• 3 initial assessments of the production site under the direction of the <b>PM</b></li> <li>• 1 initial assessment of the production site self-reliant (witnessed by <b>PM</b>)</li> </ul> <b>SAS</b> <ul style="list-style-type: none"> <li>• 5 inspection visits together with a qualified <b>SAS</b></li> <li>• 3 inspection visits conducted self-reliant (witnessed by <b>PM</b>)</li> </ul>
Skills in performing witnessing	<b>PM</b> Internal training witness testing

Legenda:

- Certification assessor (**CAS**)
- Decision maker (**DM**)
- Product manager (**PM**)
- Site assessor (**SAS**)

### 9.2.2 Qualification

The qualification of the Certification staff shall be demonstrated by means of assessing the education and experience to the above mentioned requirements. In case staff is to be qualified on the basis of deflecting criteria, written records shall be kept.

The authority to qualify staff rests with the:

- **PM**: qualification of **CAS** and **SAS**;
- management of the certification body: qualification of **DM**.

### 9.3 Report pre-certification tests

The certification body records the results of the pre-certification tests in a report.

This report shall comply with the following requirements:

- completeness: the report provides a verdict about all requirements included in the evaluation guideline;
- traceability: the findings on which the verdicts have been based shall be recorded and traceable;
- basis for decision: the **DM** shall be able to base his decision on the findings included in the report.

### 9.4 Decision for granting the certificate

The decision for granting the certificate shall be made by a qualified Decision maker which has not been involved in the pre-certification tests. The decision shall be recorded in a traceable manner.

### 9.5 Layout of quality declaration

The product certificate shall be in accordance with the model included in the Annex.

## 9.6 Nature and frequency of third party audits

The certification body shall carry out surveillance audits on site at the supplier at regular intervals to check whether the supplier complies with his obligations. The Board of Experts decides on the frequency of audits.

At the time this BRL entered into force, the frequency of audits amounts 2 audit(s) on site per year for suppliers with a quality management system in accordance with ISO 9001 for their production, which has been certified by an acknowledged body (in accordance with ISO/IEC 17021) and where the IQC scheme forms an integral part of the quality management system. In case the supplier is not in possession of a quality management system certificate (issued by Kiwa or any other accredited certification body), the frequency is increased to 3 visits for the duration of one year.

The audit program on site shall cover at least:

- the product requirements;
- the production process;
- the suppliers IQC scheme and the results obtained from inspections carried out by the supplier;
- the correct way of marking certified products;
- compliance with required procedures;
- handling complaints about products delivered.

For suppliers with a private label certificate additional audits are conducted with a frequency of one audit per two years. These additional audits are conducted at the site of the private label certificate holder. The audits are focussed on the aspects inserted in the IQC scheme and the results of the control performed by the private label holder. The IQC scheme of the private label holder shall refer to at least:

- the correct way of marking certified products;
- compliance with required procedures for receiving and final inspection;
- the storage of products and goods;
- handling complaints.

The results of each audit shall be recorded by Kiwa in a traceable manner in a report.

## 9.7 Report to the Board of Experts

The certification body shall report annually about the performed certification activities. In this report the following aspects are included:

- mutations in number of issued certificates (granted/withdrawn);
- number of executed audits in relation to the required minimum;
- results of the inspections;
- required measures for established Non-Conformities;
- received complaints about certified products.

## 9.8 Non conformities

When the certification requirements are not met, measures are taken by Kiwa in accordance with the sanctions policy, as published on the Kiwa service portal ([www.kiwa.nl](http://www.kiwa.nl)) for this evaluation guideline.

## 9.9 Interpretation of requirements

The Board of Experts may record the interpretation of requirements of this evaluation guideline in one separate interpretation document.

# 10 Titles of standards

## 10.1 Public law rules

“Staatscourant” (Dutch Government Gazette) from 18 July 2011, no. 11911 “Regeling Materialen en Chemicaliën drink- en warm tapwatervoorziening” (Regulation on materials and chemicals drinking water and warm tap water supply)

## 10.2 Standards / normative documents

Number	Title	Version*
NEN-EN ISO/IEC 17020	Conformity assessment - General criteria for the operation of various types of bodies performing inspection	
NEN-EN ISO/IEC 17021	Conformity assessment - Requirements for bodies providing audit and certification of management systems	
NEN-EN ISO/IEC 17024	Conformity assessment - General requirements for bodies operating certification of persons	
NEN-EN ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories	
NEN-EN ISO/IEC 17065	Conformity assessment - Requirements for bodies certifying products, processes and services	

\*) When no date of issue has been indicated, the latest version of the document is applicable.

# I Model certificate (informative)

	<b>Kiwa®</b> Product certificate KXXXXXX/01	
	Issued XXXX-XX-XX	
	Replaces	
	page 1 of 2	
<b>CERTIFICATE</b>	<b>Flow rate limiters</b>	
	STATEMENT BY KIWA With this product certificate, issued in accordance with the Kiwa Regulations for Product Certification, Kiwa declares that legitimate confidence exists that the products supplied by	
	<b>Name supplier</b> as specified in this 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-K835/04 "Flow rate limiters".	
	 Luc Leroy Kiwa	
	<i>Publication of this certificate is allowed. Advice: consult <a href="http://www.kiwa.nl">www.kiwa.nl</a> in order to ensure that this certificate is still valid.</i>	
<b>Supplier</b> Kiwa Nederland B.V. Sir Winston Churchilllaan 273 Postbus 70 2280 AB RIJGWijk The Netherlands Tel. +31 88 998 44 00 Fax +31 88 998 44 20 Info@kiwa.nl <a href="http://www.kiwa.nl">www.kiwa.nl</a>		

## II Model IQC-scheme (informative)

Inspection subjects	Inspection aspects	Inspection method	Inspection frequency	Inspection registration
Raw materials or materials supplied: - recipe sheets  - incoming goods inspection raw materials				
Production process, production equipment, plant: - procedures - working instructions - equipment - release of product				
Finished-products				
Measuring and testing equipment - measuring equipment  - calibration				
Logistics - internal transport - storage - preservation  - packaging - identification				