BRL K535
xx-xx-2022
Concept

Evaluation Guideline

for the Kiwa product certificate for lubricants for rubber seals

Preface

This evaluation guideline has been accepted by the Kiwa Board of Experts Watercycle (CWK), in which all relevant parties in the field of lubricants for rubber seals 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 Certification.

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Validation
This evaluation guideline has been validated by the Director Certification and Inspection of Kiwa on Date

5911.80330

Contents

1 Introduction

1.1 General

This evaluation guideline includes all relevant requirements which are employed by Kiwa when dealing with applications for the issue and maintenance of a certificate for products used as lubricants for rubber seals.

This guideline replaces the evaluation guideline BRL-K535, dated 01-02-2012.
The quality declarations issued and based on that guideline will lose their validity in 1 year after validation of this BRL.

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

The products are intended to be used as lubricants for rubber seals in cold drinking water piping systems. The requirements and evaluation methods are intended for the lubricants used for mounting rubber and TPE sealed pipes and fittings which may be made of concrete, cast iron, steel, plastic or glass fibre reinforced plastic (GRP). The pipes, fittings and seals which the lubricant is intended to be used for are assumed to conform the requirements for cold water piping systems. 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 17021-1 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.

1.3 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 I.

2 Terms and definitions

2.1 Definitions

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

- **ATP**: abbreviation of adenosine triphosphate, an organic compound that is produced by living cells to provide energy to drive many processes in living cells.
- **Biomass Production Potential (BPP);** A material's potential to enhance the multiplication of micro-organisms.
- **Board of Experts**: the Board of Experts Watercycle (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.
- **Consumer**: a person who purchases the drinking water for personal use.
- **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 directly or indirectly connected to the public drinking water distribution network of a drinking water company (source Dutch drinking water act).
- **End user**: a person who ultimately uses or is intended to ultimately use the lubricant product in the application defined in this evaluation guideline.
- **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.
- **House hold water:** non-potable water that may only be used within premises for flushing toilets (source Dutch drinking water act);
- **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.
- **Initial investigation**: 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.

3 Procedure for granting a product certificate

3.1 Initial investigation

The initial investigation 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 initial investigation, the results are presented to the Decision maker (see clause 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.

3.3 Investigation into the product and/or performance requirements

Kiwa will investigate the to be certified products against the certification requirements as stated in the certification requirements.
The necessary samples will be drawn by or on behalf of Kiwa.

3.4 Production process assessment

When assessing the production process, it is investigated whether the producer is capable of continuously producing products that meet the certification requirements. The evaluation of the production process takes place during the ongoing work at the producer.
The assessment also includes at least:

- The quality of raw materials, half-finished products and end products;
- Internal transport and storage.

3.5 Contract assessment

If the supplier is not the producer of the products to be certified, Kiwa will assess the agreement between the supplier and the producer.
This written agreement, which is available for Kiwa, includes at least:
Accreditation bodies, scheme managers and Kiwa will be given the opportunity to observe the certification activities carried out by Kiwa or on behalf of Kiwa at the producer.

4 Requirements

4.1 General

This chapter contains the requirements that the lubricants have to fulfil.

4.2 Regulatory requirements

4.2.1 Requirements to avoid deterioration of the quality of drinking water

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[1], 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 General

The supplier shall report the composition of the lubricant to the inspection body.
The supplier shall indicate to the inspection body which pipe material or pipe materials the lubricant is intended for (the scope).

4.3.2 Product instructions for end users

The supplier shall indicate the following for end users in a processing instruction:
a. the scope;
b. in what way, in what quantity and with what precautions the lubricant must be applied for effective and harmless use (for processor and drinking water);
c. how the lubricant should be stored.
d. the shelf life.
The packaging of the lubricant must be sound, can be re-closed properly and must not influence the quality of the lubricant. The latter applies for the duration of storage in the prescribed manner.

4.3.3 Microbiological requirements

The microbiological requirements of the product laid down in Ministerial Regulation refers to the requirements and test methods in EN 16421 which specifies 3 test methods of which two are accepted:

[1] 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.

1- Biomass Production Potential (BPP) measured by ATP
2- BPP measured by biofilm volume

Both of these methods are practically not applicable to lubricants. Therefore in this guideline in clause 5.2 an alternative measurement procedure is specified where the apparatus and reagents used are based on the specifications and requirements in Annex A and Annex B of EN16421 standard with exception of the procedure and expression of the results where requirement is specified in clause 4.3.3.1. These requirements apply to the lubricant, as it is delivered to end users in its packaging (unopened).

4.3.3.1 BBP measured by ATP

The lubricant must be of such a composition that bacterial species that are harmful to humans and animals or for which the drinking water legal requirements have been set (therefore also indicator organisms such as coli group), will neither multiply in the lubricant (contamination), nor die (bactericidal effect). This condition corresponds to a requirement that BPP value calculated by the formula given in clause 5.2.3 is not more than 0.12 ng ATP /mg lubricant.

4.3.4 Hygienic treatment of products in contact with drinking water

The supplier must have a procedure in place that protects the products in such way, that the hygiene is ensured during storage and transport.
In addition, the supplier shall inform the customer about the handling of products delivered under the certificate, which come into contact with drinking water and warm tap water, from arriving at the construction site through to the realization and commissioning. The primary reason for providing this the information is to contribute to the awareness of the importance of hygienic work as a ‘prevention measure’.

4.3.5 Mechanical requirements

4.3.5.1 Processability and adhesion

The lubricant, when applied in the prescribed manner (see clause 4.3.2.b), must be easy to work with under normal practical conditions. The requirement is met if the lubricant can be spread properly and evenly during the test according to clause 5.3 and does not form threads or drops and shows good adhesion.

4.3.5.2 Shelf life

The lubricant shall have a shelf life of at least 12 months under standard storage conditions or longer as stated by the supplier. The shelf life shall be specified in the quality declaration.
For assessment, the lubricant must be subjected to the test according to clause 5.3 after the declared shelf life in closed packaging, calculated from the date of manufacture. The requirement on clause 4.3.4.1 must be met in this regard.

4.3.5.3 Consistency

The supplier must declare the nominal value for the consistency of his lubricant to Kiwa and which is determined according to one of the methods described in clause 5.4. If the supplier has no value for the consistency, this value can be also determined during the pre-certification testing.

When tested in accordance with clause 5.4, the measured value for consistency shall be within the declared nominal value ± 20% thereof.

4.3.5.4 Friction-reducing effect

In the tensile test described in clause 5.5, the lubricant must lead to a significant reduction in friction. The mean tensile force calculated for lubricated sample shall be lower than 40% of the mean tensile force calculated for the blank. This ratio is called Percent lubricant friction (R%) and the requirement is also shown in the below equation:

R% =FL / FO x100 < 40

Where
FL mean tensile force (N) with lubricant
FO = mean tensile force (N) without lubricant (blank)

4.3.5.5 Effect on surfaces (concrete and steel)

When tested according to 5.6, the measured pH value must be higher than 7.

4.3.5.6 Effect on mechanical properties of plastics

When tested according to the method described in clause 5.7, there shall be no greater difference than 15% between the average value of the maximum bending stress measured for the blank segments and the exposed segments. The test pieces shall show an even surface and no discontinuity or (beginning of) crack. The pipe materials which meet this requirement will be mentioned in the certificate document.

4.3.5.7 Effect on rubber

When tested according to the procedure described in clause 5.8. the hardness of none of the rubber types shall be changed by more than 5 IRHD. The TPE and/or rubber materials which meet this requirement will be mentioned in the certificate document.

5 Test methods

5.1 General

The tests described in the next clauses below must be carried out on representative test pieces of the material or materials for which the lubricant is indicated according to the supplier's specification (see clause 4.3.1). Unless expressly stated otherwise, the tests must be carried out at a temperature of 23 ± 2 °C and a relative humidity of 60 ± 10%.

5.2 Test methods for determining the enhancement of microbiological growth by BPP measured by ATP and number of bacteria

5.2.1 Preparation solution for ATP measurements

For a test on one lubricant duplicate Erlenmeyers are prepared. Approximately 10 mg of sample (lubricant) is weighed onto a sterile glass ring. This ring with lubricant is placed with 600 ml biologically stable drinking water (NEN-EN 16421) in an AOC-free Erlenmeyer flask. Subsequently, 1 ml of river water is added to this to obtain a wide range of microorganisms. A blank is also prepared in the same way but without the lubricant.

The sample solution and the blank control are placed in an incubator at 25°C for a period of 4 weeks.

5.2.2 Growth measurements

During the incubation period, water samples are taken from the Erlenmeyer three times a week and the active biomass in the water is determined in duplo using the ATP analysis protocol described in EN 16421 Annex B.

5.2.3 Calculation of the BPP

The BPP for the lubricant is calculated by the formula given below:

$$\frac{a-b}{g/w} = \frac{ng\ ATP}{mg\ lubricant}$$

Where
g is the weight of lubricant used in the test (in mg);
w is the volume of water in the test (in l);
b is the average maximum ATP concentration of the duplo Erlenmeyers obtained with the blank during the four weeks of incubation (in ng ATP/l);
a is the average maximum ATP concentration of the duplo Erlenmeyers obtained with the lubricant sample during the four weeks of incubation (in ng ATP/l).

5.3 Determination of processability and adhesion of the lubricant

5.3.1 Required testing equipment

The test requires an air-circulating, thermostatically controlled oven, in which the test plates and the lubricant can be brought and maintained at a temperature of 30 ± 2 °C. A thermostatically or otherwise controlled dry cooling room in which the test plates and lubricant can be brought and maintained at a temperature of 0 ± 1 °C.

5.3.2 Required test pieces

For the test, two test pieces in the form of plates, half pipe shells or pipe segments are required for each type of material, with dimensions of approximately 300 x 300 mm. The surface of the test pieces must:
- be representative of the surface of the pipe type(s)over which the lubricant is intended;
- are smooth, intact and free of grease or other substances that can influence the lubricant.

5.3.3 Testing procedure

The test pieces and a sufficient amount of lubricant for each type of material to be tested are conditioned for 15 ± 1 hour in an oven at a temperature of 30 ± 2 °C. The second group test pieces and a sufficient amount of lubricant per material type are conditioned for 15 ± 1 hour in a cooling room with a temperature of 0 ± 1 °C.

After conditioning, the test piece(s) and the lubricant are removed from the conditioning spaces to a room with a temperature and humidity as stated in 5.1. The test pieces are wetted and placed at an angle of 45°. The lubricant is immediately applied in the prescribed manner (see clause 4.3.2.b) and the workability and the adhesion is assessed according to 4.3.5.1.

5.4 Determination of the consistency of the lubricant

The consistency must be measured according to ISO 2137 (cone penetration method) or according to one of the methods described in the EN 12092. The results are assessed according to 4.3.5.3.

5.5 Determination of the friction reducing effect

This test procedure is taken from the related test procedure of DVGW VP 641 guideline version 2009.

5.5.1 Required testing equipment

For the determination of the friction reducing effect, a tensile testing machine, equipped with a facility to be able to pull the sliding block through the cylinder as described below, is required, which is set up in a room with a temperature and air humidity as stated in 5.1. Test arrangement must be according to Figure 1.

5.5.2 Testing procedure

For blank measurements, the sliding block, the cylinder as well as the o-ring are cleaned so no greasy residues are present. After this step, five consecutive tensile tests are carried out and the mean value is derived for the blank. For sample tests, the sliding block is applied with lubricant. The application is performed according to the respective supplier's prescription (see clause 4.3.2.b). After this step, five consecutive tensile tests are carried out. The mean value is also derived from these measurements. From the mean values obtained, the percent lubricant friction (R%) is calculated according to the equation 1.

$$R\% = FL / FO \times 100$$

Where
FL = mean tensile force (N) with lubricant
FO = mean tensile force (N) without lubricant

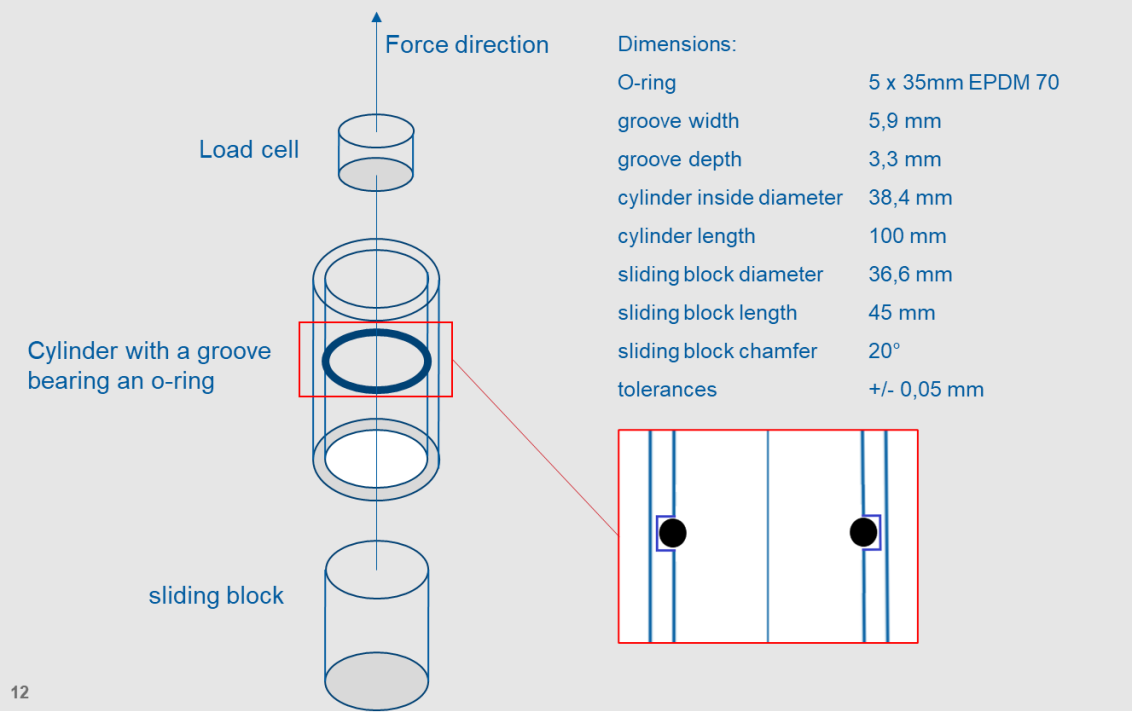

Figure 1 Illustration for the friction test set up and the required dimensions

5.6 Determination of the effect on surfaces (pH measurement)

The determination of pH of the product requires an electronic voltmeter with a high input resistance, fitted with a pH scale. See ISO 10523 for further details of the required test equipment.

1 g of lubricant is added to 10 ml of tap water and the mixture is stirred for 1 minute. Immediately after stirring, determine the pH value of the mixture in the manner prescribed in ISO 10523.

5.7 Determination of the effect on mechanical properties of plastics (strain corrosion test)

5.7.1 Required testing equipment

For the determination, a tensile testing machine, equipped with a facility to be able to load the pipe segments under pressure, as described below, is required, which is set up in a room with a temperature and air humidity as stated in 5.1.

The apparatus, the method and the calculations used must be according to ISO 10952 taking into account the descriptions as mentioned in clauses 5.7.2 and 5.7.3

5.7.2 Required samples

The determination of the influence on plastic pipe requires 2x3 identical circular segments per type plastic according to the application scope of the product with an outer diameter of 75 mm, a wall thickness of at least 3 ± 0.1 mm and a width of 15 ± 1 mm.

The determination of the influence on GRP pipe requires 2x3 identical circular segments of polyester and epoxy with a nominal diameter of at least 200 mm, a wall thickness of 15 ± 1 mm and a width of 15 ± 1 mm.

5.7.3 Testing procedure

The lubricant is applied in the prescribed manner (clause 4.3.2.b) to both inner and outer surfaces of a series of 3 segments. Followingly, a load at a deflection speed of 5 mm/min is applied until 1.5% strain on outer surface of the pipe (see note for calculation).

The same deflection is applied to 3 blank segments.

Store both exposed and unexposed segments in the deformed state for 1000 hours in a room with a temperature and humidity as mentioned in 5.1.

NOTE Pipe of the same diameter but of different wall thicknesses will develop different strains with the same deflection. Also, pipes having the same wall thickness but different constructions making up the wall may develop different strains with the same deflection. Use the formula 1 in ISO 10952 to calculate deflection amount for 1,5% strain.

At the end of 1000 hours, the maximum bending stress of both exposed and unexposed samples is taken from 3 measurements under tensile machine. After releasing the samples a visual inspection is done for any damage/deterioration.

The ring that shows a sign of deterioration(s), must then be sawn into 4 segments , as seen in figure 1. If no damage is visible, the rings must be sawn
under an elongation of 0.3%, 0.9% and 1.5% in 4 segments and then inspected.

5.8 Determination of the effect on elastomeric seals (hardness test)

5.8.1 Required testing equipment

An IRHD hardness tester according to ISO 48-2 is required for the determination of the effect of lubricant on elastomer seals. An air-circulating, thermostatically controlled oven is also required, which can be set to a temperature of 50 ± 1 °C. The measurements shall be carried out in a room with a temperature and humidity as mentioned in 5.1.

5.8.2 Required samples

For the measurement, specimens of rubber and/or TPE material are selected according to the application of scope of the producer. A disc or a rectangular block with a flat and smooth surface on both sides must be prepared. The thickness of the specimens must be 6 ± 0,5 mm and the length and width must be 20 ±2 mm, or a diameter of 20 ±2 mm. The hardness of the elastomer specimen must be 55 ± 3 °C IRHD.

5.8.3 Testing procedure

The hardness in IRHD is measured on both sides of each specimen in accordance with ISO 48-2 with a procedure as follows. The specimens are lubricated on both sides with a total of 50 ±5 g of the lubricant to be tested. The lubricated specimens are placed in an oven with a temperature of 50 ± 1 °C. After an oven residence of 14 days, they are removed from the oven after and the lubricated surfaces are cleaned with a cloth dipped in alcohol and the hardness in IRHD is measured once more according to NEN ISO 48-2.

6 Marking

6.1 General

The following must be stated on the lubricant packaging in a clear and sustainable manner:

- the supplier's name and/or registered trademark of the producer;
- production date or coding;
- the type number of the lubricant;
- the pipe material or pipe materials for which the usability of the lubricant has been assessed;
- the use-by date in unopened packaging;
- necessary precautions for proper and safe use[1)]

[1)] Reference may be made to the corresponding processing instructions by means of a remark on the packaging.

6.2 Certification mark

After concluding a Kiwa certification agreement, the certified products shall be indelible marked with the certification mark:

For products which come in contact with drinking water:

The Kiwa Water Mark "KIWA"

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:

- **initial investigation:** tests in order to ascertain that all the requirements recorded in the evaluation guideline are met;
- **inspection test:** 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;
- **inspection of the quality system of the supplier:** monitoring compliance of the IQC scheme and procedures.

8.1 Test matrix

Description of requirement	Article no. of BRL	Tests within the scope of:	
		Initial investigation	Inspection by Kiwa after granting of certificate a,b)
Regulatory requirements			
Requirements to avoid deterioration of the quality of the drinking water	4.2.1	X	X
Product requirements			
Product instructions for end users	4.3.2	X	
Microbiological requirements	4.3.3	X	X
Hygienic treatment of products in contact with drinking water	4.3.4	X	
Application and adhesion	4.3.5.1	X	IQC
Shelf life	4.3.5.2	X	
Consistency	4.3.5.3	X	IQC
Friction reducing effect	4.3.5.4	X	1x 5 years
Effect on surfaces (steel and concrete)	4.3.5.5	X	
Effect on mechanical properties of plastics	4.3.5.6	X	
Effect on rubber	4.3.5.7	X	
Marking			
Certification mark	6.1 and 6.2	X	X

a) In case the product or production process changes, 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 clause 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 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.	*Relevant experience: in the field* **SAS, CAS** : 1 year **DM**: 5 years inclusive 1 year with respect to certification Relevant technical knowledge and experience on the level of: **SAS**: High school **CAS, DM** : Bachelor

Basic requirements	Evaluation criteria
Competence for execution of site assessments. Adequate communication skills (e.g. reports, presentation skills and interviewing technique).	**SAS**: Kiwa Audit training or similar and 4 site assessments including 1 autonomic under review.
Execution of initial examination	**CAS**: 3 initial audits under review.
Conducting review	**CAS**: conducting 3 reviews

Technical competences	Evaluation Criteria
Education	**General**: Education in one of the following technical areas: • Civil Enginereing; • Enginering.
Testing skills	**General:** • 1 week laboratory training (general and scheme specific) including measuring techniques and performing tests under supervision ; • Conducting tests (per scheme).
Experience - specific	**CAS** • 3 complete applications (excluding the initial assessment of the production site) under the direction of the **PM** • 1 complete application self-reliant (to be evaluated by **PM**) • 3 initial assessments of the production site under the direction of the **PM** • 1 initial assessment of the production site self-reliant (witnessed by **PM**) **SAS** • 5 inspection visits together with a qualified **SAS** • 3 inspection visits conducted self-reliant (witnessed by **PM**)
Skills in performing witnessing	**PM** 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 initial investigation

The certification body records the results of the initial investigation 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 is 2 (two) 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 any quality management system or product certificate (issued by Kiwa or any other accredited certification body), the frequency is increased to 4 (four) 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 the frequency of audits amounts to one audit per two years. These audits are conducted at the site of the private label certificate holder. The audits are conducted at the site of private label holder and 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 Non conformities

When the certification requirements are not met, measures are taken by Kiwa in accordance with the sanctions policy as writen in the Kiwa Regulation for Certification.
The Sanctions Policy is available through the “News and Publications” page on the Kiwa website "Kiwa Regulation for Certification".

9.8 Report to the Board of Experts

De 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.

9.9 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

BJZ2011048144 29 juni 2011	Regeling van de Staatssecretaris van Infrastructuur en Milieu[1]

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	2012
NEN-EN ISO/IEC 17021-1	Conformity assessment - Requirements for bodies providing audit and certification of management systems	2015
NEN-EN ISO/IEC 17024	Conformity assessment - General requirements for bodies operating certification of persons	2012
NEN-EN ISO/IEC 17025	General requirements for the competence of testing and calibration laboratories	2018
NEN-EN ISO/IEC 17065	Conformity assessment - Requirements for bodies certifying products, processes and services	2012
NEN-EN-ISO 9001	Quality management systems - Requirements	2015
NEN-EN 16421	Influence of materials on water for human consumption - Enhancement of microbial growth (EMG)	2014
ISO 2137	Petroleum products and lubricants — Determination of cone penetration of lubricating greases and petrolatum	2020
DVGW VP 641	Gleitmittel für Steckmuffen-Verbindungen in der Wasserversorgung - Anforderungen und Prüfungen	2009
NEN-EN 12092	Adhesives - Determination of viscosity	2001
NEN-ISO 10523	Water quality - Determination of pH	2012
ISO 10952	Plastics piping systems — Glass-reinforced thermosetting plastics (GRP) pipes and fittings — Determination of the resistance to chemical attack for the inside of a section in a deflected condition	2021
NEN ISO 48-2	Rubber, vulcanized or thermoplastic - Determination of hardness - Part 2: Hardness between 10 IRHD and 100 IRHD	2018

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

[1] Valid from 1 July 2017

I Model certificate (example)

CERTIFICATE

Product certificate
KXXXXXX/0X

kiwa

Issued

Replaces

Page 1 of 1

Name product

STATEMENT BY KIWA
With this product certificate, issued in accordance with the Kiwa Regulations for Certification, Kiwa declares that legitimate confidence exists that the products supplied by

Name customer

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-xxxx "xxxxxxxxxxxxxxxxxxxxxxxxxxf" **dated [dd-mm-yyyy]** inclusive amendment sheet dated dd-mm-yyyy.

Luc Leroy
Kiwa

Publication of this certificate is allowed.
Advice: consult www.kiwa.nl in order to ensure that this certificate is still valid.

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Company
Name customer
Address customer

Phone number
Fax number
www
Email

Certification process consists of initial and regular assessment of:
- quality system
- product

140410

II Model IQC-scheme (example)

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				