

BRL 52200
20-09-2023

Assessment Directive

for the KOMO product certificate for

Pipes and fittings for plastic piping systems based on –
non-pressure – installed outside buildings – made of PVC-U



Validated by the BoE on 09-12-2022

Accepted by KOMO Quality and Assessment Committee on 17-01-2023

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**BRL 52200
20-09-2023**

**ASSESSMENT DIRECTIVE
FOR THE KOMO-PRODUCT CERTIFICATE FOR
PIPES AND FITTINGS FOR PLASTIC PIPING SYSTEMS BASED ON –
NON-PRESSURE – INSTALLED OUTSIDE BUILDINGS – MADE OF
PVC-U**

Validated by the BoE LSK on 09-12-2022

Accepted by KOMO Quality and Assessment Committee on 17-01-2023



Preface

This KOMO Assessment Directive (BRL) has been drawn up by the Kiwa Board of Experts “Leidingsystemen van Kunststof” (LSK), in which the relevant parties in the field of plastic piping and fittings are represented. This Board also supervises the certification activities based on this BRL and where necessary requires this BRL to be revised.

All references to the Board of Experts in this BRL pertain to the above mentioned Board of Experts.

This BRL will be used by certification bodies who have a license agreement with the KOMO Foundation in connection with the established certification procedures. This BRL details the requirements an applicant or an existing holder of a KOMO certificate shall comply with, and the method employed by the evaluating certification body. The certification procedure established by the certification body includes a description of the working method as employed by the certification body in the implementation of:

- (pre)certification tests required for granting and renewing a KOMO product certificate based on the present BRL;
- periodic assessments for the maintenance of a previously issued product certificate based on the present BRL.

This BRL has been revised as follows:

- Title: pipes and fittings are added;
- The entire document has been updated in accordance with the new KOMO template;
- De underlying NEN-EN 1401-1:2009 has been updated to 2019;
- § 1.7 “Marking and specifications” moved from § 4.4;
- H3 pertaining to “Requirements for products and/or materials to be processed” added;
- H3 from the previous version is now included in § 6.2, § 6.3 and § 7.4;
- H4 2nd paragraph pertaining to “testing in accordance with NVN-CEN/TS 1401-2” added;
- H4 3rd paragraph pertaining to “measurement tolerances” has been added;
- H4 4th paragraph regarding “temperature during on-site testing” has been added;
- § 3.1.4 regarding “Adhesives for PVC-U” added;
- § 4.2.1 regarding “Colour” added;
- § 4.3 Test matrices adjusted due to ‘witness-tests’ (IQC clarification);
- § 5.5 regarding “Document retention” added;
- § 5.6 regarding “Changes” added;
- § 6.5 regarding “Suspension of product certificate” added;
- Annex I removed, can now be found on the scheme manager's website.

NOTE: THIS IS AN ENGLISH TRANSLATION OF THE DUTCH VERSION OF THIS ASSESSMENT DIRECTIVE. IN CASE OF A DISPUTE, THE DUTCH VERSION SHALL BE BINDING.

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1. Introduction, general provisions, and general requirements

1.1 Introduction

Based on the requirements specified in this KOMO BRL, a KOMO product certificate is issued for pipes and/or fittings for plastic piping systems based on – non-pressure systems – installed outside buildings – made of PVC-U. This product certificate enables the certificate holder to establish that an independent authorized certification body supervises the certificate holder's production and quality control processes and the quality of the product produced under certificate. Therefore, it may be assumed that the product has the characteristics as established in this BRL.

Certification bodies that have been accredited for this product scope by the Dutch Accreditation Council (or have applied for such accreditation) and have a license agreement with the KOMO Foundation, shall use the requirements of this BRL for processing an initial application and for the further maintenance of a KOMO product certificate for PVC-U Pipes and/or fittings for non-pressure systems installed outside buildings.

In addition to the requirements of this BRL, certification bodies impose additional requirements concerning the general certification procedure, as detailed in their Regulations for Product certification.

1.2 Scope of application

The pipes and fittings are made from unplasticized Poly Vinyl Chloride (PVC-U) and are suitable for non-pressure systems installed outside buildings.

The scope of application is in accordance with NEN-EN 1401-1 in deviation for products with $DN \geq 110$ mm and $DN \leq 200$ mm shall meet the requirements of NEN-EN 1401-1 for the UD application area code.

Remark: The application area codes are defined in NEN-EN 1401-1.

Given the Dutch soil conditions and installation practice, the following SN classes can be certified, in deviation from NEN-EN 1401-1 (table 6):

- SDR 41 / SN 4;
- SDR 34 / SN 8;
- SDR 27,6 / SN16.

1.3 Validity

This revision of the BRL replaces the version of BRL 52200 dated 10 January 2017.

All KOMO product certificates that have been issued based on that version of the BRL will expire on 20-09-2024.

New certificates based on the previous version of BRL 52200 may be issued up to a maximum of 3 months after publication of the new version of the BRL.

The KOMO product certificate issued on the basis of this version of the BRL will not expire.

Validity may be limited (terminated), among other reasons, because of:

- A modification of this BRL,
- Failure of the certificate holder to comply with his obligations.

1.4 Relation with Dutch Legislation and European Rules and Regulations

1.4.1 European Regulation Construction Products (CPR, EU 305/2011)

There are no harmonized European standards applicable to the products referred to in this BRL.



1.5 Requirements to be imposed on conformity assessing institutions

With regard to the requirements laid down in this evaluation guideline, the applicant may submit, in the scope of external inspections, reports issued by conformity assessing institutions to prove that the requirements of this BRL are being satisfied. It must be demonstrated that the respective analysis/inspection/test and/or evaluation reports have been drawn up by a body that complies with the respective applicable accreditation norm with regard to the subject matter, namely:

- NEN-EN-ISO/IEC 17020 inspection institutions;
- NEN-EN-ISO/IEC 17021-1 institutions that certify management systems;
- NEN-EN-ISO/IEC 17025 for laboratories;
- NEN-EN-ISO/IEC 17065 for institutions certifying products, processes and service.

An organization will be considered as compliant with these criteria if an accreditation certificate for the respective subject matter can be submitted, issued by the Board of Accreditation (RvA) or another accreditation organization which has been accepted as a member of a multilateral agreement on the subject of mutual recognition and acceptance of accreditation, which have been drawn up within the EA, IAF and ILAC. If no accreditation certificate can be submitted, the certification organization itself will assess if compliance is given to the accreditation.

1.6 KOMO product certificate

KOMO product certificates will be issued based on this BRL. Statements included in these product certificates are based on chapters 3, 4 and 5 of this BRL, which also describes which application area codes and SNS classes are included for each type of product covered by this product.

Product certificates may be issued for the following type of products:

- PVC-U pipes for non-pressure systems installed outside buildings in accordance with chapter 4, Table ;
- PVC-U fittings for non-pressure systems installed outside buildings in accordance with chapter 4, **Fout! Verwijzingsbron niet gevonden.3.**

The product certificate to be issued shall be in accordance with the model product certificate as published for this version of the BRL on the KOMO website (www.komo.nl).

1.7 Markings and specifications

The following shall be indelibly applied to the products:

- KOMO logo or KOMO word mark
- Manufacturer's name or trademark*,
- Specification of material*,
- Wall thickness or SDR Class*,
- Nominal dimensions,
- Production period or production code.
- Application area code,

Pipes shall be marked at intervals of maximum 2 m, at least once per pipe.

Additional marking for fittings:

- Nominal measurements based on the nominal external diameter of the matching pipe,
- Angle of the fitting, if applicable*.

Optional marking:

- BRL 52200;
- Certificate number, without specifying the version, directly behind the KOMO logo or KOMO word mark.

* If there is limited space available on the products, these marks may be affixed to the smallest packaging unit.

The KOMO logo shall be applied as follows:





The KOMO word mark shall be applied as follows:

KOMO®

The delivery documents shall contain at least the following:

- KOMO logo/KOMO word mark followed by the certificate number without version indication
- Name of certificate holder,
- Production code or production date.

Furthermore, a QR code may be applied which links to the information of the respective product certificate on the KOMO website.

After issuing the KOMO product certificate this KOMO logo/KOMO word mark may also be used by the certificate holder in public communications regarding their certified activities, as specified in the "Rules and Regulations for the use of the KOMO mark" as published on the KOMO website.

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2. Terminology

For an explanation of the terminology used in this BRL for certification, please go the glossary on the website of the KOMO Foundation (www.komo.nl).

2.1 General terminology and definitions

General terms and definitions related to the product see NEN-EN 1401-1 chapter 3.

- **Certificate holder**
The party responsible for ensuring that products continuously meet the requirements of this BRL;
- **IQC scheme**
Internal Quality Control: A description of the quality controls performed by the certificate holder as part of their quality system;
- **Manufacturer**
The party responsible for the fabrication of the products covered by this BRL.

2.2 Abbreviations

For general abbreviations related to the product see NEN-EN 1519-1 chapter 4.

- **BoE**
Board of Experts
- **BRL**
Assessment Directive
- **CI**
Certification Body

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3. Requirements for products and/or materials to be processed

This chapter includes the requirements for the characteristics of the employed raw materials, materials, and products used for the production of the products to be certified according to this BRL.

3.1 General

The raw materials, products and/or materials (including semi-products) used/employed in the production process shall meet the following requirements:

3.1.1 Unplasticized Poly Vinyl Chloride (PVC-U)

The PVC-U material shall comply with the requirements stipulated in NEN-EN 1401-1.

This can be demonstrated by relevant test reports, that are not older than 5 years, performed by an ISO/IEC 17025 accredited laboratory.

The investigation in the context of the audit is specified in § 4.3 Test matrices.

3.1.2 Rubber sealing

Rubber sealing shall comply with the technical requirements stipulated in KOMO Assessment Directive BRL 2013 class I.

If the product is delivered under a product certificate based on the above-mentioned Assessment Directive, the manufacturer may assume that this requirement is being met.

If the product is supplied without a product certificate based on the above-mentioned Assessment Directive, relevant test reports, that are not older than 5 years, may be used for the evaluation provided that these have been carried out by an ISO/IEC 17025 accredited laboratory for the relevant requirement. The investigation in the context of the audit is specified in § 4.3 Test matrices.

3.1.3 TPE sealing

TPE sealing shall comply with the technical requirements stipulated in KOMO Assessment Directive BRL 2020-2.

If the product is delivered under a product certificate based on the above-mentioned Assessment Directive, the manufacturer may assume that this requirement is being met.

If the product is supplied without a product certificate based on the above-mentioned Assessment Directive, relevant test reports, that are not older than 5 years, may be used for the evaluation provided that these have been carried out by an ISO/IEC 17025 accredited laboratory for the relevant requirement. The investigation in the context of the audit is specified in § 4.3 Test matrices.

3.1.4 Adhesives for PVC-U

The adhesive shall comply with the technical requirements stipulated in KOMO Assessment Directive BRL 5221.

If the product is delivered under a product certificate based on the above-mentioned Assessment Directive, the manufacturer may assume that this requirement is being met.

If the product is supplied without a product certificate based on the above-mentioned Assessment Directive, relevant test reports, that are not older than 5 years, may be used for the evaluation provided that these have been carried out by an ISO/IEC 17025 accredited laboratory for the relevant requirement. The investigation in the context of the audit is specified in § 4.3 Test matrices.

3.2 Processing instructions

The raw materials, materials and semi-finished products to be used shall be processed in accordance with the corresponding processing procedure and/or application conditions.

3.3 Pre-certification tests and/or periodic inspection

During the initial and the periodic assessments, it is assessed whether the materials used comply and are processed/applied in accordance with the processing instructions.

See § 4.3 Test matrices.



4. Product requirements

This chapter contains the requirements for the product, translated into the product characteristics of the 'PVC-U pipes and fittings', that the product shall meet, as well as the determination methods and limit values to determine that these requirements are met.

The tests to be performed per product type and per size group are defined in NVN-CEN/TS 1401-2. The test frequencies are described in table 2 and 3 of this BRL, where the test frequency can be adjusted according to footnote 3 under table 3 of this BRL.

Measurement tolerances have already been accounted for and accordingly do not need to be considered when interpreting the test results.

Temperatures between 15 °C and 30 °C are permitted for tests performed at the production site. In case of dispute (23 ± 2) °C is used.

4.1 Product characteristics

The requirements for the product are defined in NEN-EN 1401-1 in combination with the Additional and/or deviating as defined in § 4.2.

These requirements are summarized in the test matrices Table 2 and table 3.

4.2 Additional and/or deviating characteristics

4.2.1 Colour for pipes and fittings

additional

The products shall be approximately Dusty Grey (RAL 7037) or Orange-Brown (RAL 8023).

4.2.2 Vicat softening temperature for pipes

divergent

The Vicat performed on the pipes shall be >78,5 °C.

4.2.3 Insertion depth for fittings

divergent

The insertion depths as listed in Table 7 of EN-EN 1401-1 have to be replaced with the values as listed in Table 1.

Tabel 1: Minimum insertion depth

| Diameter d_e (mm) | Insertion depth for rubber ring joins in mm A_{min} (mm)* |
|---------------------|--|
| 110 | 40 |
| 125 | 43 |
| 160 | 50 |
| 200 | 58 |

* in accordance with NEN-EN 1329-1 table 17 "Medium (M) length"

4.2.4 Bending test for fittings

additional

In view of Dutch soil conditions and installation practice, fittings and pipe sleeves must meet the requirements in accordance with NEN 7146.

4.2.5 Fixation sealing for fittings

additional

Each rubber seal shall be properly fixed in the socket. The fixation shall be such that it can withstand forces that can be expected in practice when pipes are pushed in and out.

The sleeves are considered to meet this requirement if, in the test below

- the fixation of the rubber seal is not broken;
- the rubber seal is not stretched beyond the chamber (where the ring should seal).



Fixing seals, test method:

Assessment of fixation is made by inserting a pipe into the socket.

The pipe end that will be inserted in the socket must not be chamfered. When inserting the pipe into the socket, no provisions regarding centering shall be made. Both tests should be performed in a manner consistent with practice with a pry bar or the like.

The speed of insertion shall also be similar to the assembly speed commonly used in practice.

No lubricant shall be applied to the pipe end and the seal ring. If during this test the seal ring is pushed out of the groove, it is assumed that the fixation does not meet the specified requirement.

If the seal ring remains in place, but the pipe cannot be pushed into the socket with normal force, a second test shall be carried out.

During the second test a little lubricant may be applied to the key end of the pipe and in the socket.

To meet the requirement, it must then be possible to slide the pipe into the socket or the socket onto the pipe, respectively, without pushing the sealing ring out of the groove.

To check the location of the sealing ring after the first, as well as the second test, the socket should be cut directly behind the confinement chamber.

4.2.6 Flexible fittings

additional

A socket for a flexible joint shall be of such construction, that between the socket and the associated pipe, to all sides in radial direction, tension-free, an angular rotation of at least 5° can be achieved.

4.2.7 Fittings with settlement capability

additional

4.2.7.1 Appearance

No impurities, cavities or other defects should be present in the material.

The ends must be free of burrs.

4.2.7.2 Measurements



Dimensions and method of determination of all components are in accordance with NEN-EN 1401-1.

4.2.7.3 Settlement socket section: settlement capacity.

The value for the settlement capacity from the mounting position shall be specified by the manufacturer, but shall be at least 50 mm.

4.2.7.4 Settlement socket section: inside diameter in location of the settling part

The average inside diameter at the location of the settlement part shall not make it smaller than allowed for the average inside diameters at the location of the impact edge of the fitting.

4.2.7.5 Attachment with settlement capacity: water tightness

Water tightness in the mounting position.

The joint at the location of the settlement part shall withstand the test according to NEN 7146 in the mounting position without leakage or failure.

4.2.7.6 Attachment with settlement capacity: functionality

Place a corresponding PVC standpipe in the attachment at the location of the settlement part in the mounting position. The settling part must offer such a resistance that even with the load specified by the manufacturer no slipping will take place.

- Then place the attachment in a pressure vessel on a solid surface.
- Apply a uniform settlement to the standpipe with a pressure speed of 50 mm/min. until the settling part lies against the butt edge of the fitting (final position).
- After the test, the PVC standpipe must not have pushed through the settling part and the butt edge and no fracture must have occurred in both the settling part and the respective fitting.



- 4.2.7.7 Attachment with settlement capacity: water tightness in the final position
After the test according to 4.2.7.5 the joint, in the area of the settling part in the final position, shall withstand the test according to NEN 7146 without leakage or failure.

4.2.8 Resistance to cyclic temperatures and airtightness for pipes and fittings

additional

Applicable to DN 110 to 200 mm inclusive.

Before and after performing the cyclic test at elevated temperature, the assembled system shall be tested for air tightness in accordance with NEN 7039:2003 by applying an overpressure of 4 kPa for 5 minutes. During this time the overpressure shall not decrease further than 2.75 kPa. If this condition is not met, the overpressure shall not have decreased by more than 2.5 kPa during a period of 15 minutes.

Note: A pressure of 100 kPa corresponds to 1 bar





4.3 Test matrices

Table 2: Test matrix for PVC-U Pipes

| BRL 52200 | NEN-EN 1401-1 | Product characteristics | Research in the context of ^{1, 3:} | | | |
|--|---------------------|--|---|----------------------------------|----------------------------------|---|
| | | | Type Testing ² | Audit tests ² | IQC Performed by manufacturer | |
| | | | | | At start up | Frequency |
| Material | | | | | | |
| | 5.1 | Recipe PVC-U material | x | 1 per year, During inspection | - | 1 per batch |
| | 5.1 | Density | x | 1 per year | - | - |
| | 5.2 | Mineral modifier | x | 1 per year, During inspection | - | 1 per batch |
| | 5.3 | Resistance to internal pressure | x | 1 per 3 year | - | 1 per year When using external 'non- virgin' material, every 6 months |
| | 5.6 | 'Non-virgin' material | x | 1 per year, During inspection | - | 1 per batch |
| PVC-U pipes | | | | | | |
| | 6.1 | Appearance | x | 1 per year During inspection | x | 1 per 8 h When using 'non-virgin' material, every 4 h |
| 4.2.1 | 6.2 | Colour | | | | |
| 4.2.3 | 7.2.1 + 7.2.5 | Dimensions | x | 1 per year | x | 1 per 8 h For dimensions influenced by the production process |
| | 8.1.1.2 | Impact resistance | x | 1 per year | x | 1 per 48 h When using external 'non- virgin' material, every 8 h |
| 4.2.2 | 9.1 | Vicat softening temperature | x | 1 per year | - | - When using external 'non- virgin' material, every week |
| | 9.1 | Effect of heating | x | 1 per year | x | 1 per week |
| | 9.1 | Degree of gelation | x | 1 per year | x | 1 per 24 h |
| 1.7 | 13 | Marking | x | 1 per year | x | 1 per 8 h |
| System | | | | | | |
| 4.2.8 | 10 | Resistance to cyclic temperatures and air tightness | x | 1 per 3 year | - | 1 per 3 years per 'joint design' highest SDR |
| 5.3 | - | Installation-instructions | x | 1 per year | - | - |
| Additional for pipes with moulded sleeves | | | | | | |
| 3.1.2 + 3.1.3 | 11 | Rubber or TPE sealings | x | - | - | 1 per batch |
| 4.2.3 | 7.4 | Dimensions | x | - | x | 1 per 8 h For dimensions influenced by the production process |
| 4.2.4 | - | Bending test | x | 1 per 2 year | - | - |
| 4.2.5 | - | Fixation sealing elements | x | - | - | 1 per year |
| | 10 | Leak tightness of connections with connections with elastomer ring seals | x | 1 per year On 1 dimension | - | 1 per 3 year per 'size group', per SDR, per 'joint design' |



Table 3: Test matrix for PVC-U fittings

| BRL 52200 | NEN-EN 1401-1 | Product characteristics | Research in the context of ^{1,3} : | | | |
|-----------------------|---------------|--|---|----------------------------------|-------------|--|
| | | | Type Testing ² | Audit tests ² | IQC | |
| | | | | | At start up | Performed by manufacturer |
| | | | | | Frequency | |
| Material | | | | | | |
| | 5.1 | Recipe PVC-U material | x | 1 per year, During inspection | - | 1 per batch |
| | 5.1 | Density | x | 1 per year | - | - |
| | 5.3 | Resistance to internal pressure | x | 1 per 3 years | - | 1 per 2 years When using external 'non-virgin' material, every year |
| | 4.2.3 | 'Non-virgin' material | x | 1 per year During inspection | - | 1 per batch |
| PVC-U fittings | | | | | | |
| 3.1.2 + 3.1.3 | 11 | Sealing elements | x | - | - | 1 per batch |
| | 6.1 | Appearance | x | 1 per year During inspection | x | 1 per 8h When using external 'non-virgin' material, every 4h |
| 4.2.1. | 6.2 | Colour | | | | |
| 4.2.3 | 7.3 + 7.4 | Dimensions | x | 1 per year | x | 1 per 8h For dimensions influenced by the production process |
| | 8.2.2 | Impact resistance | x | 1 per 2 years | - | 1 per year Per fitting group, per SDR, When using external 'non-virgin' material, every 8h |
| 4.2.2 | 9.2 | Vicat softening temperature | x | 1 per year | - | - When using external 'non-virgin' material, every week |
| | 9.2 | Effect of heating | x | 1 per year | x | 1 per 24h When using external 'non-virgin' material, every 8h |
| 4.2.4 | - | Bending test | x | 1 per year | - | - |
| 4.2.5 | - | Fixation sealing elements | x | - | - | 1 per year |
| 4.2.6 | - | Flexible fittings | x | 1 per 5 years | - | - |
| 4.2.7 | - | Fittings with settlement capacity | x | 1 per 3 years | - | - |
| 1.7 | 13 | Marking | x | 1 per year | x | 1 per 8h |
| System tests | | | | | | |
| | 10 | Leak tightness of connections with connections with elastomer ring seals | x | 1 per year On 1 dimension | - | 1 per 3 years per 'size group', per SDR, per 'joint design' |
| 4.2.8 | 10 | Resistance to cyclic temperatures | x | 1 per 3 years | - | 1 per 3 years per 'joint design' highest SDR |
| 5.3 | - | Installation instructions | x | 1 per year | - | - |

Notes on table 2 and 3:

- ¹ During the periodic assessment, the location assessor will check the product on the basis of a selection of the product properties mentioned above. The frequency of periodic assessments is detailed in §6.3 "Nature and frequency of periodic inspections";
- ² If, for whatever reason, it is not possible to perform a test in an independent laboratory that is accredited in accordance with ISO/IEC 17025 for that specific activity, then it is allowed to perform the test under 'witness' after obtaining approval from the CI. The 'witness' shall be carried out at a laboratory that is ISO/IEC 17025 accredited for that specific activity;
- ³ The frequency can be adjusted in consultation with the CI, e.g.:
 - a. in the case of a continuous (automated) measurement;
 - b. if it can be demonstrated that a reduction in frequency does not affect quality.



5. Requirements for certificate holders and internal quality control

5.1 General

The management of the certificate holder is responsible at all times for the quality of the production process, internal quality control and the quality of the product. The internal quality control shall meet the requirements laid down in this chapter.

5.2 Internal quality control scheme

The certificate holder shall have an implemented internal quality control scheme (IQC-scheme).

This scheme shall clearly establish:

- Which aspects are subject to inspections carried out by the organization of the certificate holder or an external organization contracted by them,
- Which methods are employed to carry out these inspections,
- The frequency of these inspections,
- How these inspection results are recorded and archived.

The IQC-scheme shall at least include the following main groups:

- Control of measuring equipment,
- Incoming (material) inspection,
- Process control,
- Product inspection,
- Internal transportation and storage,
- Delivery,
- Procedures for:
 - The handling of non-conforming products,
 - Processing of complaints,
 - Processing of non-conformities and the follow-up of corrective measures,
 - Control of the work instructions and inspection forms used.

This IQC-scheme shall use the model IQC-scheme published on the website of the CI . The scheme must be detailed in such a way that it provides CI sufficient confidence that the requirements of this evaluation guideline are continuously met.

5.3 Installation instructions

The certificate holder shall provide installation instructions for the products covered in this BRL. These instructions shall be in the Dutch language and shall cover at least the specific aspects regarding installation, storage, and transport.

5.4 Management of test and measuring equipment

It must be determined which laboratory and measuring equipment is required on the basis of this assessment guideline to demonstrate that the products meet the stated requirements. Where applicable, traceability to international standards must be demonstrated.

The relevant laboratory and measuring equipment must be provided with identification that allows the calibration status to be determined.

When necessary, laboratory and measuring equipment should be calibrated at specified intervals. The certificate holder must record the results of the calibrations.

5.5 Document retention

The documents and inspection reports referred to in this BRL shall be retained for a minimum period of 7 years or longer if so required by legislation.

Note: If products are delivered for which (upon introduction) the Quality Assurance Act for Buildings (Wkb) applies, a retention period of 20 years applies to documents and registrations that can serve to substantiate the demonstrability the declared product properties.



5.6 Changes

After a significant change to the product or the production process, it is necessary to determine whether the products still meet the requirements. The certificate holder shall notify the certification body in writing of all intended changes. The certification body determines what constitutes a significant change. After it has been established that the products with the proposed change comply with the requirements of this BRL, the change can be implemented in the certificate holder's production process.

As a guideline for the qualification of a significant change to the product or the production process, use is made of: NVN-CEN/TS 1401-2.

>



6. External conformity assessments

6.1 General

The certification body will carry out pre-certification tests for the purpose of granting a KOMO product certificate. After issuance of the KOMO product certificate, the certification body will carry out periodic inspections.

6.2 Pre-certification tests

The applicant for the product certificate shall specify which products shall be included in the product certificate. The applicant will provide all relevant information on these products for the formulation of the product specification and the declaration on the product characteristics, as they will be included in the product certificate.

The certification body will perform pre-certification tests for the purpose of issuing a product certificate in which:

- The certification body will assess if the applicant is able, by means of their internal quality control, to guarantee that the products will continuously have the characteristics and perform as established in chapters 3 and 4 of this BRL. Assessment of the production process and the finished product are part of this evaluation,
- The certification body will assess if the operational system of the internal quality control meets the requirements laid down in chapter 5 of this BRL,
- The certification body assesses the processing instructions, application conditions and maintenance and installation instructions,
- Determination of the product characteristics as specified in this BRL.

The certification body will verify whether documents provided with regard to the product and/or the internal quality control and the results stated therein meet the requirements of this BRL.

A report will be made of the pre-certification tests on the basis of which the product certificate may or may not be granted.

> 6.3 Nature and frequency of periodic inspections

After issuing the product certificate, the certification body shall carry out periodic inspections of the certificate holder in order to verify compliance with their obligations. The Board of Experts decides on the nature, scope and frequency of the periodic assessments to be carried out.

At the time this BRL came into effect, the frequency has been set at 4 inspections per year.

If the certificate holder and/or the manufacturer has a certified NEN-EN-ISO 9001 system, the frequency is set at 2 inspections per year.

The audit program includes the nature and frequency of the periodic inspections. These are related to:

- The certificate holder's IQC-scheme,
- The results of the inspections performed by the certificate holder,
- Measurements during the production process,
- Measurements of/on the final product,
- The marking of the certified products,
- Compliance with the required procedures,

whereby compliance with the requirements of this BRL is verified.

The audit program is included in this BRL.

The results of each assessment carried out, will be recorded in a report drawn up by the certification body.

6.4 Non-conformities and sanction procedure

The weighing and follow-up of non-conformities and the sanctions policy are laid down in an interpretation document accompanying this BRL, which is published on the website of the certification body.



6.5 Suspension of product certificate

If no certified products are (temporarily) produced and/or delivered, or in the event of a stop longer than 12 months, the validity of his KOMO product certificate can be (temporarily) suspended at the request of the certificate holder. Such a suspension may be granted by the certification body for a total period of 2 years maximum.

After the suspension has been granted, a certificate holder can request that his suspension is terminated earlier.

In the event of a suspension, prior to the resumption of production and delivery under a product certificate, an additional assessment shall be carried out to determine whether all the requirements in this BRL are still being met and that the suspended status can be converted to a valid status.





7. Requirements for the certification body

7.1 General

The certification body shall have a procedure that establishes the general rules employed for certification processes.

In particular these are:

- The general rules for conducting the initial inspection and in particular:
 - The way in which certificate holders are informed about the processing of an application;
 - The execution of the investigation;
 - The decision resulting from the pre-certification tests;
- The general rules regarding the performance of checks and the control aspects involved;
- The measures to be taken by the certification body in the event of non-conformities;
- The measures to be taken by the certification body in the event of improper use of certificates, certification mark, pictograms, and logos;
- The rules on termination of a certificate;
- The possibility to lodge an appeal against decisions or measures of the certification body.

7.2 Certification staff

Certification staff involved can be classified as follows:

- Certification assessor/Reviewer: in charge of preparing the design and documentation assessments, assessment of applications, and review of the conformity assessments,
- Location assessor: in charge of external conformity assessments at the certificate holder's location,
- Decision maker: in charge of making decisions with regard to pre-certification tests carried out and about continuity of certification based on performed inspections.

7.2.1 Competency criteria for certification staff

Qualification requirements for the certification staff consist of the qualification requirements for the staff executing the certification activities as laid down in the following table. The competency of the certification staff involved shall be demonstrably established.

Table 4: Competency criteria for certification staff

| Competencies | Certification assessor Reviewer | Location assessor | Decision maker |
|---|--|--|--|
| Basic competencies | | | |
| <ul style="list-style-type: none"> • Knowledge of business processes • Be able to assess professionally | <ul style="list-style-type: none"> • Higher Vocational Education • 1 year of relevant experience | <ul style="list-style-type: none"> • Secondary Vocational Education • 2 years of relevant experience | <ul style="list-style-type: none"> • Higher Vocational Education • 5 years of relevant experience of which at least 1 year in certification activities |
| Auditing competencies | N/A. | <ul style="list-style-type: none"> • Training in auditing competencies • Participation in at least 3 periodic inspections, with a minimum of 1 periodic inspection carried out independently under supervision | N/A |



| Competencies | Certification assessor Reviewer | Location assessor | Decision maker |
|---|--|---|----------------|
| Technical competencies | | | |
| Relevant knowledge of: <ul style="list-style-type: none"> • The technology for the manufacture of the products to be inspected, the execution of the processes and the providing of services • The way products are applied, processes carried out and services provided. • Existing defects that appear when using the product, during the execution of the processes as well as shortcomings in provision of services. | Knowledge of one of the following disciplines: <ul style="list-style-type: none"> • Relevant Technical Higher Vocational Education • Minimum of 1 year of experience in production, testing, inspection and/or installation, including: <ul style="list-style-type: none"> - 2x inspection under supervision • Or internal training program including: <ul style="list-style-type: none"> - 2x inspection under supervision | Knowledge of one of the following disciplines: <ul style="list-style-type: none"> • Relevant Technical Secondary Vocational Education • Minimum of 1 year of experience in production, testing, inspection and/or installation, including: <ul style="list-style-type: none"> - 3x inspection under supervision - 1x independent inspection • Or internal training program including: <ul style="list-style-type: none"> - 3x inspection under supervision - 1x independent inspection | N/A |
| Specific technical competencies | Specific knowledge of BRL at a detailed level on the specific BRL or on BRLs that are related to each other | Specific knowledge of: <ul style="list-style-type: none"> • witness inspection • the BRL chapters related to the quality system and testing | N/A |

7.2.2 Qualification of certification personnel

Certification personnel shall be demonstrably qualified by testing their knowledge and skills against the abovementioned requirements. If qualification takes place based on other criteria, this shall be documented.

The authority regarding qualification shall be established in the quality system of the certification body.

7.3 Communications about the pre-certification test and periodic inspections

The certification body will record the results of the pre-certification tests and periodic inspections in an unequivocal report. Such report shall satisfy the following requirements:

- **Completeness:** the report will include a substantiated report of the determined grade of conformity with regard to the requirements laid down in this BRL,
- **Traceability:** the results on which statements are based shall be recorded in a traceable way.

7.4 Decisions about the KOMO product certificate

The decision to grant a product certificate or imposing measures regarding the product certificate shall be based on the results laid down in the file.

The results of a pre-certification test and a periodic inspection (in case of a critical non-conformity) shall be assessed by a reviewer.

Based on the review carried out, the decision maker will determine if:

- The product certificate can be granted,
- Sanctions shall be imposed,
- The product certificate shall be suspended or withdrawn.

The reviewer and the decision makers shall not have been involved in the process of preparing the results, based on which the decision is being made.

The decision shall be recorded in a traceable manner.



7.5 Reporting to the Board of Experts

The certification body will annually present a report to the Board of Experts about the activities carried out and the respective results regarding the product certificates based on this BRL. This report shall include at least the following matters:

- The number of inspections performed versus the determined frequency,
- The number of performed pre-certification tests,
- Results of assessments,
- Measures imposed in case of detected non-conformities,
- Complaints received from third parties about certified products.

7.6 Interpretation of requirements

The Board of Experts may establish the interpretation of the requirements of this BRL in one or more interpretation document(s). Interpretation documents are available for/from members of the Board of Experts, certification bodies and the certificate holders who carry out activities based on this BRL. Interpretation documents are published on the website of the certification body.

Every certification body that makes use of this BRL is under the obligation to employ the interpretations laid down in this document.





8. List of documents

8.1 Public law and Rules and Regulations

| | |
|------------------|--|
| CPR, EU 305/2011 | European Construction Products Regulation |
| Wkb | Wet Kwaliteitsborging voor het bouwen Quality Assurance Act for Buildings |

8.2 Normative documents

This BRL refers to the following normative documents:

| | |
|----------------------------|---|
| NEN-EN 1329-1:2020 | Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Unplasticized poly(vinyl chloride) (PVC-U) Part 1: Specifications for pipes, fittings and the system |
| NEN-EN 1401-1:2019+A1:2023 | Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U) Part 1: Specifications for pipes, fittings and the system |
| NEN 7146:2001 | Plastics piping systems - Bending test for thermoplastics fittings - Test method and specifications |
| NEN 7039:2003 (withdrawn) | Plastics pipes and fittings for soil and waste water purposes - Elevated temperature cycling test - Test method for air tightness |
| BRL 2013:2016 + WB:2018 | Vulcanised rubber products for cold and hot non-drinking water applications |
| BRL 2020-2:2016 | TPE pipe joint seals for non-pressure waste water and drainage Part-2: Seals |
| BRL 5221:2016 | Adhesives for joints in plastics piping systems for sewerage inside buildings |

Remark: Verification is made annually whether the normative documents are still up to date. Modifications to the applicable normative documents will be published on the services page on the website of the certification body that has prepared this BRL

8.3 Informative documents

This BRL remits to the following documents for information purposes:

| | |
|-------------------------|--|
| NEN-EN-ISO 9001 | Quality management systems – Requirements |
| NVN-CEN/TS 1401-2: 2020 | Plastics piping systems for non-pressure underground drainage and sewerage - Unplasticized poly(vinyl chloride) (PVC-U) Part 2: Guidance for the assessment of conformity |