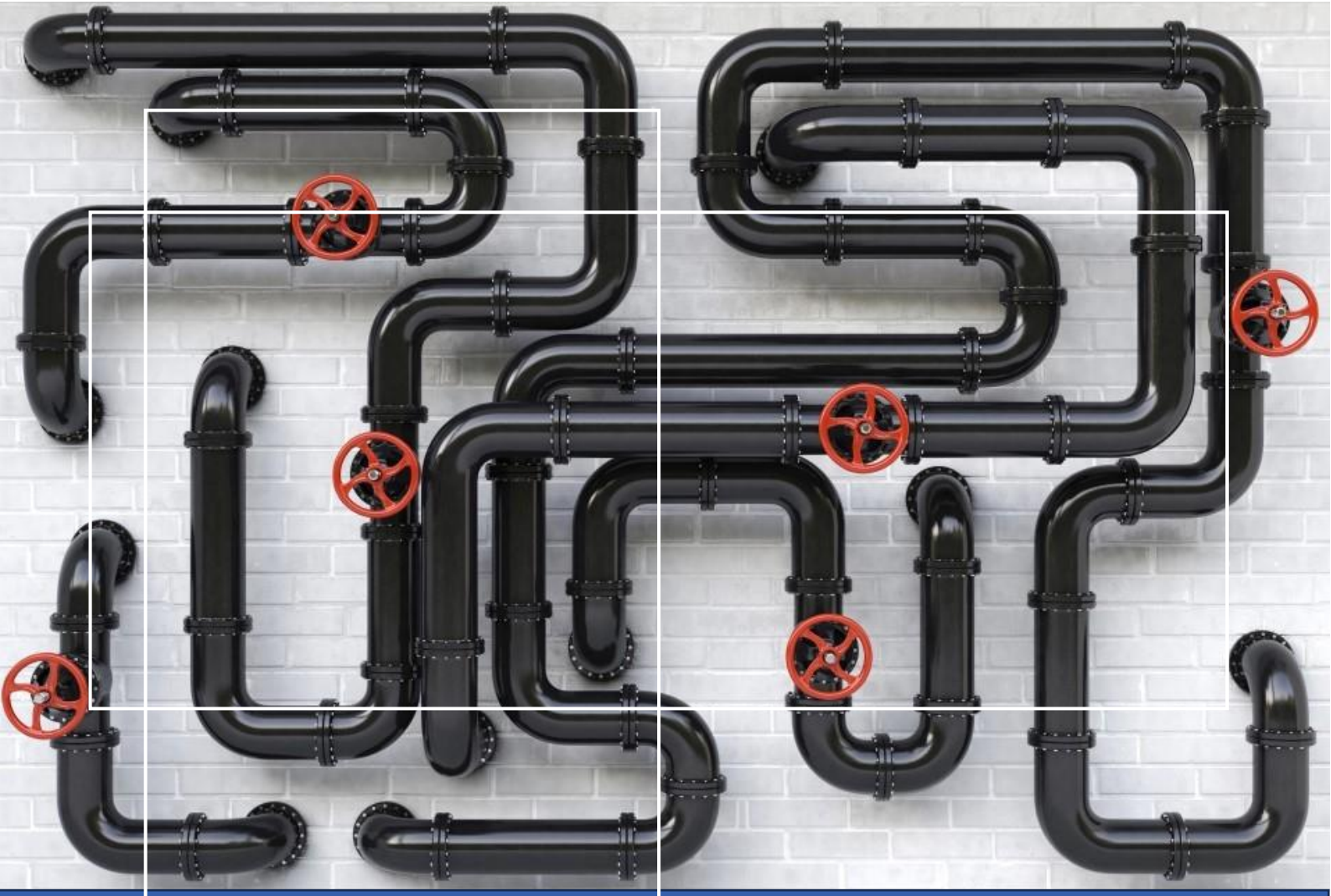

BRL 9208-2
June 27th, 2025

Assessment Directive

For the KOMO® product certificate for

Pipes and fittings with smooth internal and profiled external surface intended for non-pressure sewerage outside buildings made of PP or PE

- Specific requirements

Validated by the BoE LSK on April 1st, 2025
Accepted by the KOMO Quality and Assessment Committee on May 8th, 2025

kiwa

KOMO. Kwaliteit zoals beloofd.

BRL 9208-2

Published on June 27th, 2025

ASSESSMENT DIRECTIVE
FOR THE KOMO® PRODUCT CERTIFICATE FOR

PIPES AND FITTINGS WITH SMOOTH INTERNAL AND PROFILED EXTERNAL SURFACE INTENDED FOR NON-PRESSURE SEWERAGE OUTSIDE BUILDINGS MADE OF PP OR PE – SPECIFIC REQUIREMENTS

Validated by the BoE LSK on April 1st,2025

Accepted by the KOMO® Quality and Assessment committee on May 8th, 2025

Publisher: Kiwa Nederland B.V.

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 plastics 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 (BoE) in this BRL pertain to the above mentioned Board of Experts.

This BRL will be used together with BRL 6300 'General requirements for products used in plastic piping systems' by certification bodies who have a license agreement with the KOMO Foundation in connection with the established certification procedures. BRL 6300 and any additional and/or deviating requirements as stated in this BRL detail 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:

- The investigation for the granting and renewal of a KOMO certificate,
- The periodic assessments for the maintenance of an existing KOMO certificate.

The following sections of the BRL have been amended:

- Alignment with BRL 6300 "General requirements for products used in plastics piping systems";
- The underlying NEN-EN 13476-1:2007 has been updated to NEN-EN 13476-1:2025;
- The underlying NEN-EN 13476-3:2007+A1:2009 has been updated to NEN-EN 13476-3:2025;
- The underlying CEN/TS 13476-4:2013 has been updated to CEN/TS 13476-4:2019;
- § 4.3.7 Inlets (version 2017) has been deleted;
- § 5.2.8 (vs. 2025) Ultraviolet (UV) has been amended;
- § 5.4 Test matrices have been expanded;
- Table 4.1 (version 2017) – "Relationship between installed system performance and tested properties" has been deleted;
- Annex I deleted as this is now available on the website of the certification body.

Administrative change dated January 2026:

- The prEN 13476-1 has now been published and thus replaced by NEN-EN 13476-1 (throughout the
- document);
- The prEN 13476-2 has now been published and thus replaced by NEN-EN 13476-2 (throughout the
- document);
- In §5.2.5: Is also applicable for pipes with integrated sockets;
- Incorrect table numbering and associated reference fixed (throughout the document);
- In table 4 a reference to §3.1.1 is included for the PP material.

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.

Publisher:

Kiwa Nederland B.V.
Sir Winston Churchilllaan 273
P.O. Box 70
2280 AB RIJSWIJK

Tel. 088 998 44 00
info@kiwa.com
www.kiwa.com

Table of Contents

1 Introduction, general provisions, and general requirements

1.1 Introduction

Based on the requirements in this Assessment Directive (BRL), in combination with the requirements in BRL 6300 "General requirements for products used in plastic piping systems", a KOMO product certificate is issued for pipes and fittings Type B (with a smooth internal and profiled external surface) made of PP or PE for non-pressure outdoor sewerage systems, Additions and/or deviations from BRL 6300 are specified in the relevant section of this BRL. With this KOMO certificate, the certificate holder can demonstrate to its customers that a competent, independent organization oversees the certificate holder's production process, the product quality, and the associated quality assurance. This means that it can be assumed that the product possesses the properties as specified in this BRL.

The requirements stipulated in this BRL in combination with BRL 6300, are used by certification bodies accredited by the Dutch Accreditation Council (RvA) or have applied for accreditation, and who have a license agreement with the KOMO Foundation, when processing applications for the issuance and maintenance of a KOMO certificate for pipes and fittings Type B (with a smooth internal and profiled external surface) made of PP or PE for non-pressure outdoor sewerage systems.

In addition to the requirements stipulated in this BRL in combination with BRL 6300, the certification bodies impose additional requirements concerning the general procedural requirements for certification, as laid down in their internal certification procedures.

1.2 Scope and field of application

The products are used in plastic piping systems.

1.2.1 Scope

The pipes and fittings are made from Polypropylene (PP) or Polyethylene (PE) with a smooth internal and profiled external surface, defined as Type B.

1.2.2 Field of application

The pipes and fittings are used in non-pressure outdoor sewerage systems.
The field of application is in conformance with NEN-EN 13476-1 and NEN-EN 13476-3, with the following exceptions:

- Products with DN ≥ 110 mm and DN ≤ 200 mm shall meet the requirements of NEN-EN 13476-3 for the UD application area code.
- Products with DN > 200 mm shall meet the requirements of NEN-EN 13476-3 for the U application area code.

Note: The application area codes are defined in NEN-EN 13476-1.

Due to the soil conditions and installation practice in The Netherlands, the SN 2 and SN 4 classes as defined in the NEN-EN 13476-3 are not permitted.

1.3 Validity

This version of the BRL replaces the version dated August 30th, 2017.

The KOMO product certificates issued based on that version of the BRL will in any case lose their validity on December 27th, 2025.

New product certificates that are based on the aforementioned previous version of this BRL may be issued up to a period of 3 months before the current product certificates shall be replaced.

The KOMO product certificate is valid indefinitely.

The validity period may be limited (terminated) by:

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

1.4 Relationship with legislation and regulations

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

No harmonized European standard applies to the products covered by this BRL.

1.5 Requirements for conformity assessment bodies

No additions and/or deviations from § 1.5 of BRL 6300.

1.6 KOMO certificate

KOMO product certificates will be issued based on this BRL in combination with BRL 6300. Statements included in these product certificates are based on chapters 3, 4, 5 and 6 of this BRL.

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

- PP Pipes Type B, conform § 5.4;
- PP Fittings Type B, conform § 5.4;
- PE Pipes Type B, conform § 5.4;
- PE Fittings Type B, conform § 5.4;
- A combination of the above.

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).

The product certificate shall specify the following for each product:

- Colour;
- Material designation;
- SN/SDR Class;
- Nominal dimensions;
- Angle of the fitting, if applicable;
- Application area code;
- The sealing method applicable.

1.7 Marking and designations

In addition to the marks and designations of BRL 6300, the following applies:

The following shall be indelibly marked on the products:

- Material designation*;
- SN/SDR Class;
- Nominal dimensions;
- Application area code.

Optional marking:

- BRL 9208-2.

Pipes shall be indelibly marked at intervals of maximum two meters and at least once per pipe.

Additional marking for fittings:

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

In deviation to the markings and designations requirements of BRL 6300, the following applies:

- Certificate number, without specifying the version, directly behind the KOMO logo or KOMO word mark;
- Name of certified company (optional).

2 Terminology

In addition to the terminology stated in BRL 6300 the following shall apply:

- terms, definitions, symbols and abbreviations as detailed in NEN-EN 13476-1,
- terms, definitions, symbols and abbreviations as detailed in NEN-EN 13476-3.

3 Requirements for the design and for the products and/or materials to be processed

This chapter details the requirements for the properties of the raw materials, components and products used during the production of the product to be certified under this BRL.

3.1 Raw materials, components and products

The following requirements apply to raw materials, products, and/or components (including semi-finished components) used in production:

3.1.1 Plastic

PP shall demonstrably meet the requirements as stated in NEN-EN 13476-3 § 5.3.

PE shall demonstrably meet the requirements as stated in NEN-EN 13476-3 § 5.4.

3.1.1.1 Recyclates

The intermediate layer may consist of up to 100% recyclates provided the following requirements are met:

PP recyclates shall demonstrably meet the requirements as stated in NEN-EN 13476-3 § 5.3.

PE recyclates shall demonstrably meet the requirements as stated in NEN-EN 13476-3 § 5.4.

The manufacturer shall document the use of recyclates and verify this through the manufacturer's IQC scheme.

The manufacturer shall demonstrably document the following:

- the traceability of the recyclates supplier(s);
- the results of tests performed by the manufacturer or supplier on this material or recyclates.

3.1.2 Elastomeric seals

If elastomeric seals are used, they shall demonstrably meet the technical requirements specified in BRL 2013 Class I.

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

3.1.3 TPE-sealing

If TPE sealing is used, this shall demonstrably meet the technical requirements specified in BRL 2020-2.

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

3.2 Processing instructions

The raw materials, materials, and semi-finished products to be used shall be processed in accordance with the corresponding processing procedures.

3.3 Pre-certification tests and periodic inspection

If the raw materials, semi-finished products and components are supplied without a product certificate based on the aforementioned Assessment Guidelines, relevant test reports no older than five years and performed by an NEN-EN-ISO/IEC 17025-accredited laboratory for the relevant procedure may be used for approval.

The frequency of the periodic assessment is specified in § 5.4.

4 Requirements pertaining to the performance in the application

For product certification, there are no requirements pertaining to the performance of the product in the application.

5 Product requirements and test methods

This chapter details the product requirements for the products as well as the test methods and acceptance criteria for these requirements.

The tests are performed per product type and diameter group as detailed in NVN-CEN/TS 13476-4:2025. The test frequencies are stipulated in § 5.4 of this BRL. The test frequencies can be adjusted in accordance with Note 3 in § 5.4 of this BRL.

The applicable tolerances have been accounted for when establishing these requirements and therefore do not need to be considered when drawing conclusions about compliance.

For tests performed at the production site, a temperature between 15 °C and 30 °C is permitted. In the event of a dispute, (23 ± 2) °C is used.

5.1 Product requirements

The requirements for the product and/or materials are stated in NEN-EN 13476-1 and NEN-EN 13476-3, along with the deviations and/or additional requirements as specified in § 5.2.

The product requirements are summarized in the test matrix § 5.4.

5.2 Deviations and/or additional requirements

5.2.1 Thermal stability (OIT)

Additional for all products

The OIT is only performed on the inner and outer layers and not on the intermediate layer. If the same PP material is used for the inner and outer layers, the test only needs to be performed once.

5.2.2 Colour

Additional for pipes and fittings

The recommended colour of the inner and outer layers:

- PP products shall be approximately dust gray (RAL 7037), orange-brown (RAL 8023), or black (RAL 9004 / RAL 9011).
- PE products shall be black (RAL 9004 / RAL 9011).

5.2.3 Insertion depth A_{min}

Deviation for fittings and pipes with integrated socket

For diameters from 110 mm up to and including 200 mm, the insertion depths shall be in accordance with Table 1. This applies to pipes with integrated sockets and the insertion depth of fittings.

Table 1: Minimum insertion depth

Diameter d_e (mm)	Insertion depth A_{min} (mm)
110	40
125	43
140	46
160	50
200	58

5.2.4 UV (Ultraviolet) ageing

Additional for PP products, not for products with a black outer layer

Tensile impact strength after exposure to a Xenon-arc lamp

After exposure of the test pieces to a Xenon-arc lamp in accordance with the following exposure test, the average tensile impact strength of the exposed piping material shall not be less than 75% of the average tensile impact strength of the non-exposed piping material. The tensile impact strength shall be determined in accordance with NEN-EN-ISO 8256.

Exposure may also take place using the so-called outdoor exposure. The products will receive a global radiation of 2 GJ/m^2.

In case of doubt, the outdoor exposure will be normative.

Test method: ageing test

Determine the tensile impact strength of the suitable test pieces, which will be exposed in equipment in accordance with NEN-EN-ISO 4892-2 and in testing circumstances as stipulated in NEN-EN-ISO 4892-2 in Table 3, cycle number 1 (method A: exposure with the help of daylight filters – simulation of outdoor exposure).

Exposure time in the equipment shall be calculated on basis of the required global radiation dose and in accordance with EOTA TR 010, attachment C.

In this case the required exposure time is:

$$t = \frac{E}{I} = \frac{E_{sun} \times 0{,}06 \times 0{,}67}{I} = \frac{2 \times 10^9 \times 0{,}06 \times 0{,}67}{60} = 1{,}34 \times 10^6 \ (seconds)$$

t = 372 hours.

where:

E_{sun} represents the equivalent global radiation dose for outdoor exposure; and

I represents the intensity of the light source measured by the equipment between 300 and 400 nm.

Note: The abovementioned calculation method is an approximate method for calculating the exposure duration. However, it provides a logical basis when considering the fact that natural weathering itself is a variable phenomenon that depends on location, aspect, shadow, etc.

Test pieces: pipes

The test pieces can be made from a solid-wall pipe of the same material or from a special test plate.

The thickness of the test piece shall preferably be (3 ± 0,2) mm or (4 ± 0,2) mm. Ten test pieces are made according to Type 3 of NEN-EN-ISO 8256. Five of the test pieces will be exposed.

The side of the test pieces or the material corresponding to the outside of the tube is oriented towards the light source during the aging test.

Test pieces: fittings

This test for the fittings does not need to be repeated if the compound used is the same as for pipes that have already been tested.

Ten test pieces are milled from the fittings according to Type 3 of NEN-EN-ISO 8256. Five of the test pieces will be exposed.

5.2.5 Fixation of elastomeric seals

Additional for fittings and pipes with integrated sockets

Every elastomeric seal shall be properly secured in the socket such that it can withstand the forces exerted in practice when extending or retracting the pipes.

After testing the socket shall meet the following requirements:

a. The seal remains firmly fixed;

b. The seal does not distort such that it exceeds the sealing space available.

Test method

Evaluation of fixation takes place by sliding a spigot into the socket.

The spigot that slides into the socket shall not be chamfered. No measures will be taken to center the spigot in the socket during insertion. Both tests shall be conducted in accordance with the installation instructions of the certificate holder.

The use of lubricants is not allowed in the first test. If the elastomeric seal is forced out of the socket, then the fixation requirement has not been met.

If the elastomeric seal remains in position but the spigot cannot be inserted into the socket without exerting additional force, then a second test shall be performed.

In this case a small amount of lubricant may be applied to the spigot. If the spigot can now be inserted into the socket or vice versa without dislodging the elastomeric seal, then the fixation requirement has been met.

After the first or the second test, the pipe shall be sawn off directly behind the socket, in order to verify that the insertion has been performed correctly.

5.2.6 Bend test

Additional for fittings and pipes with integrated sockets

Considering the Dutch soil conditions and installation practice, the fittings and pipes with integrated sockets with a DN ≥ 110 mm, shall be subjected to a bend test in accordance with Table 2.

After performing the test, the test pieces shall not show any signs of splitting, cracking, loosening and/or leakage.

Table 2: Bend test

Test Parameters	Method
Test time: 15 min Minimum displacement: 170 mm/ 8° Minimum of 2 samples Leak testing with water	NEN-EN-ISO 13264

5.2.7 Air tightness test

Additional for pipes and fittings with 110 mm < DN < 200 mm

Before and after the elevated temperature cycling test in accordance with NEN-EN-ISO 13257, 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 to under 2,75 kPa. If this condition is not met, then the overpressure shall not have decreased to under 2,5 kPa. during a 15 minutes period.

The test setup may also be designed in accordance with Figure 2 of NEN-EN-ISO 13257.

Note: A pressure of100 kPa is equivalent to 1 bar.

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 as detailed below:

- Instructions for the connection process, if applicable;
- Requirements regarding fastening materials;
- The maximum allowable (ambient) temperature of the system;
- Storage and transport.

5.4 Test matrices

Various test matrices have been drawn up for these products:

- PP pipes Type B see Table 3;
- PP fittings Type B see Table 4;
- PE pipes Type B see Table 5;
- PE fittings Type B see Table 6.

Notes applicable to the test matrices of § 5.4:

1. During the periodic assessment, the inspector will check the product against a selection of the product properties listed in the test matrix. The frequency of the periodic assessments is specified in BRL 6300, Section 7.3, Nature and frequency of periodic assessments.
2. If, for any reason, it is not possible to perform a test in an NEN-EN-ISO/IEC 17025-accredited and impartial laboratory specifically for that activity, the test can be performed under witness supervision in an NEN-EN-ISO/IEC 17025-accredited laboratory in consultation with the certification body.
3. The frequency can be adjusted in consultation with certification body, 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.
4. IQC tests can be partly covered by the control tests performed by the certification body.

Table 3: Test matrix PP pipes Type B

BRL 9208-2	NEN-EN 13476-1	NEN-EN 13476-3	Product characteristic	Tests in the context of [1,3]:			
				Initial Audit [2]	Audit test [2]	IQC Performed by manufacturer	
						At start up	Frequency [4]
1.7			Marking and designations	x	1 per year	x	1 per 8 hours
3.1.1		5.3	Plastic	x	1 per year	-	1 per batch
		5.3	Resistance to internal pressure	x	1 per 3 years	-	1 per year When using external recyclates every 6 months
		5.3.2	Melt mass-flow rate (MFR)	x	1 per year	-	-
5.2.1		5.3.2	Thermal stability (OIT)	x	1 per year	-	-
3.1.1.1			Recyclates	x	1 per year	-	-
	6.1		Appearance	x	1 per year	x	1 per 8 hours
5.2.2	6.2		Colour	x	1 per year	x	1 per 8 hours
5.2.3		8	Dimensions	x	1 per year On 1 dimension	x	1 per 8 hours For dimensions affected by the process
		9.2.1	Resistance to heating – Oven test	x	1 per year	x	1 per week
		10.1	Ring stiffness	x	1 per year	x	1 per week Only when using recyclates
		10.1	Impact strength	x	1 per year	x	1 per week
		10.1	Ring flexibility	x	1 per year	x	1 per week Only when using recyclates
		10.1	Creep ratio	x	1 per year	-	-
5.2.4			UV (Ultraviolet) ageing Not for black products	x	PP-C: 1 per 4 yrs. PP-H: 1 per year Per colour	-	-
		11	Tightness of elastomeric ring seal joint	x	1 per 2 years On 1 dimension	-	1 per 2 years Per 'size'-group, per type of seal
		11	Resistance to cyclical temperatures	x	1 per 5 year Per design	-	1 per 5 years Per design and material used
		11	Tensile test of welded or fused joints For welded joints	x	1 per year	-	-
5.2.7			Air tightness test 110mm <DN< 200mm	x	1 per 5 year Per design	-	1 per 5 years Per design and material used
5.3			Installation instructions	x	1 per year	-	-
Additional for spirally formed pipes							
		10.1	Tensile strength of seam	x	1 per year	x	-
Additional for pipes with an integrated socket							
3.1.2 3.1.3			Rubber or TPE seals	x	1 per year	-	1 per batch
5.2.5			Fixation of elastomeric seals	x	1 per 5 years	-	-
5.2.6			Bend test	x	1 per year	-	-

Table 4: Test matrix PP fittings Type B

BRL 9208-2	NEN-EN 13476-1	NEN-EN 13476-3	Product characteristic	Tests in the context of [1,3]:			
				Initial Audit [2]	Audit test [2]	IQC Performed by manufacturer	
						At start up	Frequency [4]
1.7			Marking and designations	x	1 per year	x	1 per 8 hours
3.1.1		5.3	PP material	x	1 per year	-	1 per batch
		5.3	Resistance to internal pressure	x	1 per 3 years	-	1 per year When using external recyclates every 6 months
		5.3.2	Melt mass-flow rate (MFR)	x	1 per year	-	-
5.2.1		5.3.2	Thermal stability (OIT)	x	1 per year	-	-
3.1.1.1			Recyclates	x	1 per year	-	-
3.1.2 3.1.3			Rubber or TPE seals	x	1 per year	-	1 per batch
	6.1		Appearance	x	1 per year	x	1 per 8 hours
5.2.2	6.2		Colour	x	1 per year	x	1 per 8 hours
5.2.3		8	Dimensions	x	1 per year	x	1 per 8 hours For dimensions affected by the process
		9.2.2	Effect of heating	x	1 per year	x	-
		10.2	Stiffness	x	1 per year	x	-
		10.2	Impact strength – Fall test	x	1 per year	x	1 per week
5.2.4			UV (Ultraviolet) ageing Not for black products	x	1 per 5 years	-	-
		11	Tightness of elastomeric ring seal joint	x	1 per 2 years On 1 dimension	-	1 per 2 years Per 'size'-group, per type of seal
		11	Resistance to cyclical temperatures	x	1 per 5 years Per design	-	1 per 5 years Per design and material used
		11	Tensile test of welded or fused joints For welded joints	x	1 per year	-	-
5.2.5			Fixation of elastomeric seals	x	1 per 5 years	-	-
5.2.6			Bend test	x	1 per year	-	-
5.2.7			Air tightness test 110mm <DN< 200mm	x	1 per 5 years Per design	-	1 per 5 years Per design and material used
5.3			Installation instructions	x	1 per year	-	-
Additional for assembled fittings							
		10.2	Mechanical strength or flexibility	x	1 per year Per "size" group	-	1 per year Per fitting group and S-Class
		11	Water tightness	x	1 per year	-	1 per batch

Table 5: Test matrix PE pipes Type B

BRL 9208-2	NEN-EN 13476-1	NEN-EN 13476-3	Product characteristic	Tests in the context of [1, 3]:			
				Initial Audit [2]	Audit test [2]	IQC Performed by manufacturer	
						At start up	Frequency [4]
1.7			Marking and designations	x	1 per year	x	1 per 8 hours
3.1.1		5.4	Plastic	x	1 per year	-	1 per batch
		5.4.2	Resistance to internal pressure	x	1 per 3 years	-	1 per year When using external recyclates every 6 months
		5.4.2	Melt mass-flow rate (MFR)	x	1 per year	-	-
5.2.1		5.4.2	Thermal stability (OIT)	x	1 per year	-	-
		5.4.2	Reference density	x	1 per year	-	-
3.1.1.1			Recyclates	x	1 per year	-	-
	6.1		Appearance	x	1 per year	x	1 per 8 hours
5.2.2	6.2		Colour	x	1 per year	x	1 per 8 hours
5.2.3		8	Dimensions	x	1 per year	x	1 per 8 hours For dimensions affected by the process
		9.3.1	Resistance to heating – Oven test	x	1 per year	-	-
		10.1	Ring stiffness	x	1 per year	x	1 per week Only when using recyclates
		10.1	Impact strength	x	1 per year	x	1 per week
		10.1	Ring flexibility	x	1 per year	x	1 per week Only when using recyclates
		10.1	Creep ratio	x	1 per year	-	-
		11	Tightness of elastomeric ring seal joint	x	1 per 2 years On 1 dimension	-	1 per 2 years Per 'size'-group, per type of seal
		11	Resistance to cyclical temperatures	x	1 per 5 years Per design	-	1 per 5 years Per design and material used
		11	Tensile test of welded or fused joints For welded joints	x	1 per year	-	-
5.2.7			Air tightness test 110mm <DN< 200mm	x	1 per 5 years Per design	-	1 per 5 years Per design and material used
5.3			Installation instructions	x	1 per year	-	-
Additional for spirally formed pipes							
		10.1	Tensile strength of seam	x	1 per year	x	-
Additional for pipes with an integrated socket							
3.1.2 3.1.3			Rubber or TPE seals	x	1 per year	-	1 per batch
5.2.5			Fixation of elastomeric seals	x	1 per 5 years	-	-
5.2.6			Bend test	x	1 per year	-	-

Table 6: Test matrix PE fittings Type B

BRL 9208-2	NEN-EN 13476-1	NEN-EN 13476-3	Product characteristic	Tests in the context of [1,3]:			
				Initial Audit [2]	Audit test [2]	IQC Performed by manufacturer	
						At start up	Frequency [4]
1.7			Marking and designations	x	1 per year	x	1 per 8 hours
3.1.1		5.4	Plastic	x	1 per year	-	1 per batch
		5.4.2	Resistance to internal pressure	x	1 per 3 years	-	1 per year When using external recyclates every 6 months
		5.4.2	Melt mass-flow rate (MFR)	x	1 per year	-	-
5.2.1		5.4.2	Thermal stability (OIT)	x	1 per year	-	-
		5.4.2	Reference density	x	1 per year	-	-
3.1.1.1			Recyclates	x	1 per year	-	-
3.1.2 3.1.3			Rubber or TPE seals	x	1 per year	-	1 per batch
	6.1		Appearance	x	1 per year	x	1 per 8 hours
5.2.2	6.2		Colour	x	1 per year	x	1 per 8 hours
5.2.3		8	Dimensions	x	1 per year	x	1 per 8 hours For dimensions affected by the process
		9.3.2	Effect of heating	x	1 per year	-	-
		10.2	Stiffness	x	1 per 2 years	-	-
		10.2	Impact strength – Fall test	x	1 per year	x	1 per week
		11	Tightness of elastomeric ring seal joint	x	1 per 2 years On 1 dimension	-	1 per 2 years Per 'size'-group, per type of seal
		11	Resistance to cyclical temperatures	x	1 per 5 year Per design	-	1 per 5 years Per design and material used
		11	Resistance to cyclical temperatures	x	1 per year	-	-
5.2.5			Fixation of elastomeric seals	x	1 per 5 years	-	-
5.2.6			Bend test	x	1 per year	-	-
5.2.7			Air tightness test 110mm <DN< 200mm	x	1 per 5 year Per design	-	1 per 5 years Per design and material used
5.3			Installation instructions	x	1 per year	-	-
Additional for assembled fittings							
		10.2	Mechanical strength or flexibility	x	1 per year Per "size" group	-	1 per year Per fitting group and S-Class
		11	Water tightness	x	1 per year	-	1 per batch

6 Requirements pertaining to the quality system

The requirements are in accordance with Chapter 6 of BRL 6300.

7 External conformity assessments

The requirements are in accordance with Chapter 7 of BRL 6300.

8 Requirements for the certification body

The requirements are in accordance with Chapter 8 of BRL 6300.

9 List of standards

9.1 Normative documents

The following documents are normatively referenced to in this BRL:

BRL 2013:2016 + Amdt.:2018	Vulcanized rubber products for cold and hot non-drinking water applications
BRL 2020-2:2022	TPE pipe joint seals for non-pressure waste water and drainage – Part 2: Seals
BRL 6300:2024	General requirements for products applied in plastic piping systems
EOTA TR 010:2004	Exposure procedure for artificial weathering
NEN 7039:2003 (Withdrawn:2019)	Plastics pipes and fittings for soil and waste water purposes – Elevated temperature cycling test – Test method for air tightness
NEN-EN 13476-1:2025	Plastics piping systems for non-pressure underground drains and sewers – Structured-wall piping systems of plasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) – Part 1: General requirements and performance characteristics
NEN-EN 13476-3:2025	Plastics piping systems for non-pressure underground drains and sewers – Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) – Part 3: Specifications for pipes and fittings with smooth internal and profiled external surface and the system, Type B
NEN-EN-ISO 4892-2:2013	Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps
NEN-EN-ISO 8256:2024	Plastics – Determination of tensile-impact strength
NEN-EN-ISO 13257:2019	Thermoplastics piping systems for non-pressure applications – Test method for resistance to elevated temperature cycling
NEN-EN-ISO 13264:2017/ ANL1:2024	Thermoplastics piping systems for non-pressure underground drainage and sewerage – Thermoplastics fittings – Test method for mechanical strength or flexibility of fabricated fittings
CEN/TS 13476-4:2019	Plastics piping systems for non-pressure underground drains and sewers – Structured-wall piping systems of unplasticized poly(vinyl chloride) (PVC-U), polypropylene (PP) and polyethylene (PE) – Part 4: Assessment of conformity

Note:

Verification if the normative documents are still up-to-date is carried out annually. Modifications of the applicable normative documents will be published on the services page on the website of the certification body which publishes the BRL.