



BRL 52203

01-12-2025

ASSESSMENT DIRECTIVE

For the KOMO® product certificate for

Pipes for PE pressure pipe systems for outdoor sewerage
– Specific requirements

Validated by the BoE LSK on October 22nd, 2025
Accepted by the KOMO Quality and Assessment Committee on November 26th, 2025

kiwa



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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:

- The general requirements have been replaced by a reference to BRL 6300,
- Requirements regarding materials and products have been updated following the update of the NEN-EN 12201 series.

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 in this 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 for PE pressure piping systems for outdoor sewer 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 submitted an application 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 for PE pressure pipe systems for outdoor sewer 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 area of application

1.2.1 Scope

The pipes are made of PE 80, PE 100 or PE 100-RC, with the type(s) as specified in NEN-EN 12201-2. The products with the dimensions given in Table 1 fall within the scope of this BRL.

Table 1 – Permitted class and diameters

Class	DN/OD in mm
SDR 6	$32 \leq \text{DN} \leq 355$
SDR 7,4	$32 \leq \text{DN} \leq 450$
SDR 9	$32 \leq \text{DN} \leq 800$
SDR 11	$32 \leq \text{DN} \leq 1000$
SDR 13,6	$40 \leq \text{DN} \leq 1200$
SDR 17	$50 \leq \text{DN} \leq 1200$
SDR 21	$63 \leq \text{DN} \leq 1200$

1.2.2 Field of application

The products are used in PE pressure pipe systems for outdoor sewerage, both above and below ground. The products can also be used in vacuum drainage systems.

Note 1: The pipes can be combined with fittings that demonstrably meet the mechanical requirements of NEN-EN 12201-3.

Note 2: The PE pipes are not intended for industrial applications, as covered by NEN-EN-ISO 15494.

1.3 Validity

In addition to §1.3 of BRL 6300, the following is applicable:

This version of the BRL replaces the version dated October 28th, 2019.

The KOMO product certificates issued based on that version of the BRL will in any case lose their validity on June 1th, 2026.

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.

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

The following type of certificate shall be issued based on this BRL in combination with BRL 6300:

- KOMO product certificate.

The statements in these KOMO certificates are based on **\$Error! Reference source not found.**, §5 and §6 of this BRL.

Product certificates can be issued for the following types of products:

- PE 80 pressure pipes;
- PE 100 pressure pipes,
- PE 100-RC pressure pipes,
- A combination of the above.

The product certificate to be issued shall correspond to 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,
- SDR Class,
- Nominal dimensions,
- Pressure class.

1.7 Marking and designations

In addition to §1.7 of BRL 6300, the following applies:

The following shall be indelibly marked on the pipes at least once every two meters:

- Material designation,
- SDR Class,
- Nominal dimensions,
- Pressure class,
- BRL 52203.

In deviation to §1.7 of BRL 6300, the following applies:

- The name of the certificate holder is an optional marking.



2 Terminology

In addition to Chapter 2 of BRL 6300, the specific terms, definitions, symbols and abbreviations are detailed in NEN EN 12201-1 & -2.



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 Design/Type

The certificate holder shall ensure that a clear description of all relevant design data is available, including:

- raw materials, components, and products
- production process.

Any proposed changes to the aforementioned parameters shall be reported to the certification body. The certification body will assess whether the change could affect the certified products, requiring a reassessment of the relevant performance(s).

After determining that the products with the proposed change meet the requirements in §**Error! Reference source not found.**, §5 and §6 of this BRL, the change can be implemented in the certificate holder's production process.

The document FprCEN/TS 12201-7 Guide for Conformity Assessment is used as a guideline for qualifying a significant change to the product or production process. A significant change is determined in consultation with the certification body.

3.2 Raw materials, components and products

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

3.2.1 Plastic

Polyethylene (PE), classified as PE 80, PE 100 and PE 100-RC, must demonstrably meet the requirements as stated in NEN-EN 12201-2 §5.1 and §5.2.

Deviation

The RCP S4 test (Resistance to rapid crack propagation) doesn't need to be carried out.

The weathering resistance test shall only be carried out on fully coloured pipe and co-extruded coloured pipe.

3.2.2 Rework and recyclates

Rework, as defined in NEN-EN 12201-1, may be used without restriction.

Notwithstanding §5 of NEN-EN 12201-2, recyclates derived from products of the same compound may be used if the material originates from the manufacturers own production facilities. Other sources of recyclates are not permitted.

3.3 Processing instructions

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

3.4 Initial and periodic assessments

If the raw materials, components, and semi-finished products are supplied without a product certificate based on the aforementioned BRL, the relevant test reports may be used for approval that are no older than 5 years and carried out by a NEN-EN-ISO/IEC 17025 laboratory accredited for the relevant procedure.

It shall also be demonstrated that the raw materials/assemblies are identical to those on which the test was performed.

The frequency of the periodic assessment test 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 described in FprCEN/TS 12201-7. The test frequencies are stipulated in §5.4 of this BRL. The test frequencies can be adjusted in accordance with Note 3 of Table 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 defined in NEN-EN 12201-2, along with the deviations and/or additional requirements as specified in §5.2 of this BRL.

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

5.2 Deviations and/or additional requirements

5.2.1 Colour

Additional

All types of PE pipes shall be approximately:

- black (RAL 9004/RAL 9011);
- black with a brown (RAL 8023) stripes.

An outer layer may also be completely brown (RAL 8023).

If the pipes have brown stripes, the number and dimensions of the brown stripes on the black pipe shall comply with Table 2.

Table 2 – Stripe dimensions

Pipe diameter DN/OD in mm	Minimum number of stripes	Minimum width of stripes in mm	Maximum depth of stripes in mm
$32 \leq d_n \leq 63$	3	2	$0,2 \times e_n$
$75 \leq d_n \leq 160$	4	4	$0,15 \times e_n$
$180 \leq d_n \leq 400$	4	9	$0,15 \times e_n$
$450 \leq d_n \leq 1200$	6	12	$0,1 \times e_n$

5.2.2 Ring stiffness

Deviation

The PE pipes shall have a SN class $\geq 8 \text{ kN/m}^2$. This shall be demonstrated per material and the highest SDR according to Table 3.

Table 3 – Ring stiffness

Property	Requirement	Test parameters		Test method
Ring stiffness	SN: $\geq 8 \text{ kN/m}^2$	Test temperature	$(23 \pm 2) \text{ }^\circ\text{C}$	NEN-EN-ISO 9969
		Deflection	3 %	
		Indentation speed	Conform test method	

5.2.3 Performance requirements NEN-EN 12201-2, chapter 11

The performance requirements are not assessed in this BRL.

5.2.4 Marking NEN-EN 12201-2, chapter 12

This has been covered in §1.7 of this BRL.



5.3 Installation instructions

The certificate holder shall provide installation instructions for the products covered by this BRL. These instructions shall be in the Dutch language and include at least the specific aspects of installation, such as:

- Instructions regarding installation;
- Storage and transport.

5.4 Test matrix

The test matrix applicable for PE pressure pipes is given in Table 4.

Notes for Table 4 :

- 1 During the periodic assessment, the inspector will check the product based on a selection of the product properties listed above. The frequency of the periodic assessments is specified in BRL 6300 §7.3 Nature and frequency of periodic assessments.
- 2 If, for any reason, it is not possible to perform a test in an impartial laboratory specifically accredited to NEN-EN-ISO/IEC 17025 for that activity, the test can be performed under witness supervision and in consultation with the certification body.
- 3 The frequency can be adjusted in consultation with the certification body, e.g.:
 - a. in the case of continuous (automated) measurements;
 - b. if it can be demonstrated that a reduction in the frequency will not compromise the quality.
- 4 IQC tests can be partially covered by the control tests performed by the certification body.

Table 4 – Test matrix PE pressure pipes

BRL 52203	NEN-EN 12201-1	NEN-EN 12201-2	Product requirement	Tests within the scope of ^{1, 3:}			
				Initial assessment ²	Periodic assessment ²	IQC Performed by manufacturer	
						At start-up	Frequency ⁴
General							
1.7			Marking and designations	X	1 per year	X	1 per 8 hours
5.3			Installation instructions	X	1 per year	-	-
Material (Chapter 3)							
	5.2.3.1		Compound density	X	-	-	-
			OIT	X	-	-	-
			MFR	X	1 per year per material		
			Volatile content	X	-	-	-
			Water content	X	-	-	-
			Carbon black content	X	-	-	-
			Carbon black dispersion	X	-	-	-
			Pigment dispersion	X	-	-	-
	Resistance to SCG (PE 100-RC) - SHT - CRB - AFNCT		x	-	-	-	
	5.2.3.2		Resistance to weathering - Decohesion of an electrofusion joint - Hydrostatic strength (1.000 h; 80 °C) - Elongation at break	X	-	-	-
			Resistance to SCG - NPT (PE 80 and PE 100) - ANPT (PE 100-RC)	X	-	-	-
			Tensile test on butt fusion welds	X	-	-	-
			5.3	Fusion compatibility	X	-	-
5.4		Classification and designation	X	-	-	-	
3.2.2		Rework and recycles	X	1x per year	-	Per batch	



BRL 52203	NEN-EN 12201-1	NEN-EN 12201-2	Product requirement	Tests within the scope of ^{1,3} :			
				Initial assessment ²	Periodic assessment ²	IQC Performed by manufacturer	
						At start-up	Frequency ⁴
5.2.1		6.1	Appearance	X	1 per year per dimension group	X	1 per 8 hours
			Colour	X	1 per year per dimension group	X	1 per 8 hours
		7	Dimensions	X	1 per year per dimension group	X	1 per 8 hours For dimensions influenced by the process
		8.2	Hysrostatic strength - 20 °C, 100 h - 80 °C, 165 h - 80 °C, 1.000 h	X - X	- - 1 per year, 1 dimension group	- - -	- 1 per batch/week 1 per year per dimension group, per compound
			Elongation at break	X	1 per year per dimension group	-	1 per year Per dimension group, per compound Rework: 1 per batch/week
			Resistance to SCG - NPT (PE 80 and PE 100) - ANPT (PE 100-RC) - SHT (PE 100-RC) - CRB (PE 100-RC)	X X X X	1 per year 1 per 2 years 1 per 2 years 1 per 2 years	-	-
		9.2	OIT	X	1 per year per dimension group, per compound	-	-
			MFR	X	1 per year per dimension group, per compound	-	-
			Longitudinal reversion e ≤ 16 mm	X	1 per year per dimension group	-	1 per year per dimension group, per compound
		9.3	Circumferential reversion DN > 250 mm	X	1 per year for dimension group 3 and 4	-	1 per year per dimension group, per compound
		B.7	Delamination of co-extruded pipes After 'Length change after heating' and 'Resistance to internal pressure'	X	-	-	-
		B.8	Integrity of the structure after deflection for co-extruded pipes	X	-	-	1 per year per dimension group, per compound
		C.3	Weathering resistance for peelable pipes	X	-	-	-



6 Requirements in respect of 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 6300: 2024	General requirements for products used in plastic piping systems
NEN-EN 12201-1: 2024	Plastics piping systems for water supply, and for drains and sewers under pressure – Polyethylene (PE) – Part 1: General
NEN-EN 12201-2: 2024	Plastics piping systems for water supply, and for drains and sewers under pressure – Polyethylene (PE) – Part 2: Pipes
FprCEN/TS 12201-7: 2024	Plastics piping systems for water supply, and for drains and sewers under pressure – Polyethylene (PE) – Part 7: Assessment of conformity
NEN-EN-ISO 9969:2016	Thermoplastics pipes – Determination of ring stiffness
NEN-EN-ISO 15494:2018	Plastics piping systems for industrial applications – Polybutene (PB), polyethylene (PE), polyethylene of raised temperature resistance (PE-RT), crosslinked polyethylene (PE-X), polypropylene (PP) – Metric series for specifications for components and the system

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.

9.2 Informative documents

The following documents are informatively referenced to in this BRL:

NEN-EN 12201-3: 2024	Plastics piping systems for water supply, and for drains and sewers under pressure – Polyethylene (PE) – Part 3: Fittings
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