

# Amendment BRL 2020

## TPE pipe joint seals for non-pressure waste water

December 31, 2014

### Validation, acceptance and binding declaration

Validated by Kiwa Board of Experts Plastics Piping Systems (LSK) on December 12, 2014.  
Accepted by the Board of the 'Stichting KOMO' on December 31, 2014.

This amendment is declared binding by Kiwa starting December 31, 2014.

### Validity of quality declarations

This amendment replaces the amendment of October 18, 2013 of BRL 2020 dated November 1, 2006. Articles of the amendment of March 28, 2013 that are not changed are part of this amendment.  
All quality declarations issued based on that evaluation guideline lose their validity as from January 1, 2015.

### Right of use

The use of this amendment by third parties, no matter the purpose, is only permitted after this use is settled in a written agreement with Kiwa.

### Description of the change

In this amendment changes with respect to the content of KOMO quality declarations, because of the implementation of the 'Verordening bouwproducten' are given.  
It concerns model quality declarations, the paragraph related to CE marking, the reference to the KOMO website for the templates for quality declarations, the initial evaluation and the external control.

#### General:

In the sections 1.1, 3.5, 4, 5.1 of BRL 2020 d.d. 01-11-2006 the word "Kiwa" shall be changed by "certification body".

*Change 1.5 "Acceptance of research reports supplied by the supplier" in:*

## 1.5 Relation to European Construction Products Regulation (CPR, EU 305/2011)

The harmonised European standard EN 681-2 is applicable to the products within the scope of this evaluation guideline.

*Change 1.6 "Quality certificate " in:*

## 1.6 Requirements for test institutes

### 1.6.1 Investigation related to essential requirements

For the essential requirements given in annex ZA of the harmonised European standard, the values mentioned in the declaration of performance of the producer, are used.

### 1.6.2 Investigation related to other requirements

If the supplier submits reports from research bodies or laboratories to show that the requirements of the Evaluation Guideline are met, it will have to be shown that such reports were prepared by a body meeting the applicable accreditation standard, i.e.:

- NEN-EN-ISO/IEC 17020 for inspection bodies;
- NEN-EN ISO/IEC 17021 for certification bodies certifying systems;
- NEN-EN-ISO/IEC 17024 for certification bodies certifying persons.
- NEN-EN-ISO/IEC 17025 for laboratories;
- NEN-EN-ISO/IEC 17065 or NEN-EN 45011 for certification bodies certifying products;

#### **Explanation**

NEN-EN-ISO/IEC 17065 is published on September 15, 2012 and will replace NEN-EN 45011. For this the transition period is 3 years.

The body is deemed to meet these criteria if an accreditation certificate can be submitted which has been issued by the Dutch Accreditation Council (RvA) or an accreditation body with which the Dutch Accreditation Council has signed a mutual acceptance agreement.

This accreditation shall relate to the tests required for this Evaluation Guideline.

If no accreditation certificate can be submitted, the certification body itself shall verify whether the accreditation standard has been met or (let) carry out the tests concerned itself.

*Change 1.7 "Definitions " in":*

## **1.7 Quality declaration**

Based on the KOMO-system applicable to this evaluation guideline, a KOMO® quality declaration for product certification will be issued.

The claims in this quality declaration are based on chapters 2 and 3 (product requirements and determination methods and quality system requirements) of this evaluation guideline.

On the website of the 'Stichting KOMO' ([www.komo.nl](http://www.komo.nl)) the templates for the quality declarations applicable for this evaluation guideline are given. The quality declaration to be issued should match.

*Add:*

## **1.8 Definitions**

TPE: Thermoplastic material made from a polymer or blend of polymers that does not require vulcanization or crosslinking during processing, yet has elastic and rubberlike properties, at its service temperature. These properties disappear at processing temperature, so that further processing is possible, but return when the material is returned to its service temperature.

*Add:*

## **1.9 Initial evaluation**

To obtain a KOMO quality declaration the certification body makes an investigation. Parts of the initial evaluation are:

- A. Control of the documents handed over by the applicant to check if the requirements of this evaluation guideline are met.
- B. Evaluation of the declaration of performance (prepared in the context of the European construction products Regulation) handed over by the applicant to check whether the declared values for the essential requirements are better than those required in this evaluation guideline.
- C. Determination of other product characteristics mentioned in this evaluation guideline as far as these are no essential requirements as given in annex ZA of the harmonised European standard, to check if these characteristics are fulfilling the requirements of this evaluation guideline also.

*Add:*

## **1.10 Evaluation of the quality system**

Related to the essential requirements (as recorded in the declaration of performance in the context of the European construction products Regulation) there are no controls regarding the KOMO®-quality declaration of the quality system or samples. The quality assurance for the essential requirements is covered by the Factory Production Control (FPC) as described in annex ZA of the harmonised European standard.

To obtain the KOMO®-quality declaration related to the other product characteristics, the certification body will conduct an investigation. Parts of the initial evaluation are:

- Evaluation of the production process
- Evaluation of the quality system and the IQC scheme
- Verification on the presence and the functioning of the other required procedures

It had to be established if the quality system is conform the requirements of chapters 3 and 4 of this evaluation guideline.

Add after the title of chapter “2 Product requirements and determination methods” the following text:  
Related to the requirements given in this chapter for essential requirements there will be no initial evaluation and these will be no part of the quality declaration.  
All references to the initial investigation and the quality declaration for essential requirements in this chapter have to be removed.

Change: **“2.4 Appearance, homogeneity, dimension and volume”**

By: **“2.4 Appearance, homogeneity and dimensions”**

#### **2.4.3 Dimensions and volume**

Replace complete section by:

##### **“2.4.3 Dimensions**

The nominal measurements of the TPE seals and the acceptable deviations shall be in accordance with the figures stated by the manufacturer and they shall be laid down in a drawing. Tolerances shall be specified from the appropriate classes of ISO 3302.

For dimensions of O-rings also reference could be made to NEN-ISO 3601-1.

Determine the dimensions by means of appropriate measuring equipment (see ISO 23529). Test according to 2.7.3.”

#### **2.5.1 General**

Replace complete section by:

“Unless stated otherwise, tests shall be carried out at a temperature of 23 °C according to ISO 23529.

The allowed tolerances for all mentioned test durations and test temperatures shall be according to ISO 23529.

For tests carried out at the production location, a temperature between 15 °C and 30 °C is allowed.”

#### **2.7.3 Dimensions and volume**

Replace complete section by:

##### **“2.7.3 Dimensions**

Determine the dimensions by means of appropriate measuring equipment.

Test the findings against that which is laid down in 2.4.3.”

Add after 2.5.9:

#### **“2.5.10 Properties for special type of products**

##### **2.5.10.1 General requirements**

A TPE ring made of an extruded profile or cord shall not contain more than one weld, possible joints between different TPE compounds excluded, except by agreement between the manufacturer and the client.

A ring made of two TPE compounds shall not contain more than one weld in the direction of the outline of the product.

##### **2.5.10.2 Behaviour at elongation**

###### **2.5.10.2.1 TPE seals with a weld**

The weld shall not crack or contract when tested in accordance with 2.7.11.2.1 and 2.7.11.2.3.

###### **2.5.10.2.2 Seals made from two TPE compounds**

The joint shall not crack or contract when tested in accordance with 2.7.11.2.2 and 2.7.11.2.3.”

Add after 2.7.10:

##### **“2.7.11.2 Behaviour at elongation**

### 2.7.11.2.1 TPE seals with a weld

Elongate two TPE seals with a weld with a tensile speed of 500 mm/min to 100% elongation, unless a reduced elongation has been agreed upon by both the buyer and the manufacturer. Such agreement has to be reported to the inspection body. Keep the rings in an elongated state for at least 30 seconds. In case of a TPE seal made of welded coextruded profile or cord having a soft TPE and a hard plastic part (fig. 2A), a TPE part with the weld of at least 100 mm length is first cut off from the hard part (fig. 2B), and then tested (fig. 2C).

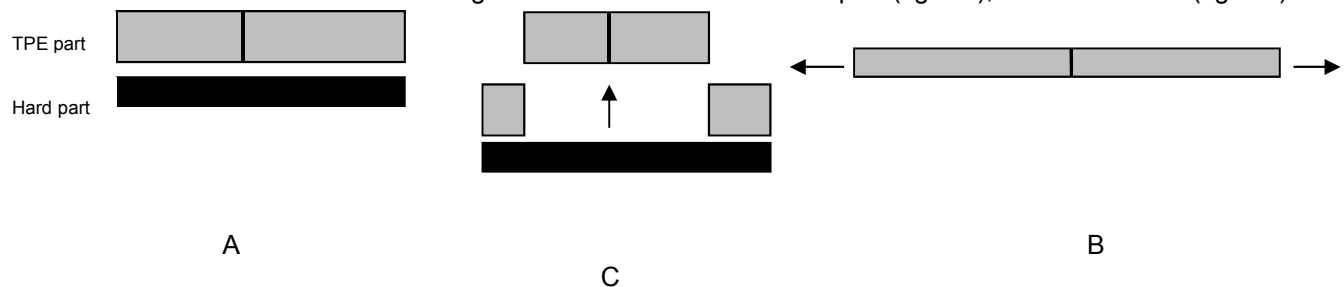


Figure 2. Test of behaviour at elongation on coextruded welded profile or cord

### 2.7.11.2.2 Seals made from two TPE compounds

Elongate two test pieces containing the joint between the two materials with a tensile speed of 500 mm/min to 100% elongation. Keep the test pieces in an elongated state for at least 30 seconds.

### 2.7.11.2.3 Elongation test for welded products after ageing

After ageing for 168 hours at 70 °C in accordance with ISO 188 the test of 2.7.11.1 and / or 2.7.11.2 is repeated.”

Change in chapter 4 “Summary of tests and inspections” the test matrix in:

#### 4.1 Testmatrix

| Description of requirement   | Article BRL | Tests within the scope of |                                                   |           |
|------------------------------|-------------|---------------------------|---------------------------------------------------|-----------|
|                              |             | Initial evaluation        | Surveillance by CI after issue of the certificate |           |
|                              |             |                           | Inspection <sup>1)</sup>                          | Frequency |
| Resistance against chemicals | 2.3.2       | X                         | X                                                 | 1x year   |
| Appearance                   | 2.4.1       | X                         | X                                                 | 1x year   |
| Homogeneity                  | 2.4.2       | X                         | X                                                 | 1x year   |
| Stress fall                  | 2.5.6       | X                         | X                                                 | 1 x year  |
| Resistance to oil            | 2.5.9       | X                         | --                                                | --        |
| Marking on product           | 2.8         | X                         | X                                                 | 1x year   |

Replace paragraph 5.4 “Frequency of external inspections” in:

Related to the essential requirements (as recorded in the declaration of performance in the context of the European construction products Regulation) there is no control for the KOMO quality declaration of the quality system or samples. The quality assurance of the essential requirements are covered by Factory Production Control (FPC) as described in annex ZA of the harmonised European standard.

Related to the other product characteristics the certification body will periodically control the quality system, the production process and product properties to assure if the requirements of this evaluation guideline are fulfilled.

At the time of validation of this evaluation guideline this frequency has been fixed at four inspection visits per year.

Replace in all texts of the BRL the words “product certificate” by “quality declaration”.

Delete appendix C containing the model the model product certificate.