

KOMO[®]

Product certificate

Number	K2110/10	Replaces	K2110/09
Issued	2016-03-31	Date	2015-01-01
Valid until	Indefinite	Page	1 of 3

Waco B.V.

DECLARATION BY KIWA

This quality declaration for product certification with attestation is based on BRL 9205 Segmental box culverts made of precast structural concrete dated 31 December 2014, issued in accordance with the Kiwa Regulations for Certification.

The quality system and the product characteristics for segmental box culverts made of precast structural concrete are periodically controlled and the performance of the segmental box culverts assessed in their application and the assumptions of the assessment are periodically controlled.

Based on the above, Kiwa declares that

- It has every reason to believe that the precast structural concrete culvert elements supplied by the certificate holder meet the requirements set out in the BRL upon delivery, providing that the segmental box culverts bear the KOMO[®] mark as described in this quality declaration; The essential characteristics set out in the applicable European standard are not part of this declaration.
- The culverts built from the segmental box culverts will perform as described in this KOMO quality declaration, providing that:
 - the application conditions and technical specifications described in this KOMO quality declaration are met;
 - the processes are performed in accordance with the regulations and/or processing methods set out in this KOMO quality declaration.

Kiwa declares that, considering the above, the application of the segmental box culverts made of precast structural concrete meets the requirements of the Dutch Building Decree as specified on page 2 of this quality declaration.

Within the framework of this KOMO quality declaration, the production of the other parts of the culverts and the incorporation of the segmental box culverts in the culverts will not be controlled.



Luc Leroy
Kiwa

The certificate has been added to the list on the website of Stichting KOMO: www.komo.nl.

Advice: go to www.kiwa.nl to find out whether this certificate is valid.

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The following have been assessed:
quality system
product
Periodic check

Segmental box culverts made of precast structural concrete

TECHNICAL SPECIFICATIONS

1.1 SUBJECT

Segmental box culverts made of precast structural concrete for use in rectangular culverts for the transport of (waste) water under free fall

1.2 REQUIRED CHARACTERISTICS

The statements in Chapter 3 of this quality declaration for segmental box culverts made of precast structural concrete for use in rectangular culverts apply if the product meets the below requirements:

Our reference	Determination method	Requirement
Shape and dimensions	NEN-EN 14844, Art. 5.2	Minimum dimensions bigger than 4.3.1.2 in NEN-EN 14844 and dimensions within the tolerances according to 4.3.1.1 and 4.3.1.4 respectively in NEN-EN 14844.
Durability	NEN-EN 206-1 and NEN-EN 1992-1-1	Concrete cover greater or equal to the required value in the applicable exposure class. Composition of the concrete in accordance with the requirements in EN 206-1 for the applicable exposure class.

1.3 PRODUCT CHARACTERISTICS

The product meets the product requirements set out in BRL 9205.

The segmental box culverts are produced in accordance with the drawings approved by the buyer or, with permission from the buyer, drawings certified by the company and calculations that meet the requirements in Chapter 6 of BRL 9205.

1.4 MARKS

The products are marked with the adjacent KOMO® mark.
This mark has been applied as follows: A label, stamp or sticker.



Required designations:

- manufacturer's brand or name;
- date of manufacture (may be in code);
- a mark indicating the top of the segmental box culvert;
- if necessary, a mark indicating the position of the segmental box culvert in the total culvert.

2. PROCESSING

The products are mainly intended for use in rectangular culverts for the transport of water or waste water under free fall. The expected loads determine the load class of the segmental box culvert to be used.

For other areas of application (for example: air ducts, tunnels, underground shelters and the like), the customer and the manufacturer will choose the load class based on the appropriate calculation.

The manufacturer has agreed with Kiwa to assure the quality of the product between its final inspection in the factory and its delivery to the delivery site.

The manufacturer will make available to the buyer all documentation relevant to the buyer, such as processing and use guidelines, product certificates, warnings and the like at the moment of delivery.

The manufacturer undertakes to ensure the correct contents of this documentation.

3. PERFORMANCE UNDER THE BUILDING DECREE

Date on which the Building Decree enters into effect

Section of Building Decree No. and title	Limit value / Determination method	Performance in accordance with quality declaration	Comments related to application
Chapter 2 – Safety regulations			
2.1 General strength of the structure	A maximum limit state of a culvert is not exceeded during the design life in NEN-EN 1990 for the basic load combinations set out in NEN-EN 1990. The maximum limit state is determined in accordance with NEN-EN 1992-1-1		To be determined per project.

Strength of the construction (Building Decree section 2.1)

The certificate holder or buyer prepares drawings and calculations for each culvert in accordance with NEN-EN 1992-1-1 which shows that the culvert meets said section of the Building Decree.

When accepting an order, the certificate holder and the customer agree to perform the tasks and responsibilities with respect to the calculations and drawings of the segmental box culverts in accordance with one of the categories described in Annexe 8 of Criteria 73. For more information, see www.kiwabeton.nl.



Segmental box culverts made of precast structural concrete

Explanation

The certifying body does not check the calculations in their entirety but performs a random check on the following aspects:

- the actual execution of the agreed tasks by the certificate holder;
- the correct processing of the agreed basic assumptions in the calculations;
- the correct processing of the results of the calculations in the drawings.

4. TIPS FOR THE USER

Products listed under 'Technical specifications' must be inspected upon receipt for the following:

- you are receiving the product you ordered;
- the mark and the way in which the mark is applied are correct;
- the products do not show any visible defects as a result of transport and the like.

Upon receipt of the delivery, make sure that the products listed under 'Processing' meet the specifications described in that section.

If you reject the products based on the aforementioned, please contact:

- Waco B.V.
- and, if necessary:
- Kiwa Nederland B.V.

The products must be stored, transported and processed in accordance with the provisions stated under 'Processing'.

Observe the conditions for use mentioned under 'Performance'.

The correctness of the performance of the essential characteristics will not be checked under this quality declaration.

The statements in this quality declaration may not be used to replace the CE marking and/or the corresponding mandatory Declaration of Performance.

6. LIST OF DOCUMENTS MENTIONED*

BRL 9205	Segmental box culverts made of reinforced concrete.
Criteria 73	Requirements to be set for the quality system for a product certificate for segmental box culverts made of precast structural concrete.
NEN-EN 206-1	Concrete - Part 1: Specifications, properties, production and conformity.
NEN-EN 1990	Eurocode 0 – Fundamentals of the structural design.
NEN-EN 1992-1-1	Eurocode 2: Design and calculation of concrete structures – Part 1-1: General rules and rules for buildings.
NEN 8005	Dutch addition to NEN-EN 206-1: Concrete - Part 1: Specifications, properties, production and conformity.
NEN-EN 14844	Precast concrete products - Segmental box culverts.
Building Decree	Building Decree 2012.

*For the correct version of the above-mentioned standards, please see the last amendment of BRL 9205.

