technical sheet

CERTIFICATION OF

# VITRIFIED CLAY PIPE SYSTEMS

BENOR

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## TECHNICAL DATA SHEET

| QUICK CODE | VERSION | VALIDITY |
|---|---|---|
| **0001/0001** | **6.0 - 3/02/2026** | **CERTIFIED** |

| CERTIFICATE HOLDER | PRODUCTION UNIT | CERTIFICATE NUMBER |
|---|---|---|
| STEINZEUG-KERAMO 'WERK 2'<br>Paalsteenstraat 36<br>BE-3500 Hasselt<br>+32 11 21 02 32<br>info@steinzeug-keramo.com | STEINZEUG-KERAMO 'WERK 2'<br>Paalsteenstraat 36<br>BE-3500 Hasselt<br>+32 11 21 02 32<br>info@steinzeug-keramo.com | BENOR<br>001/95<br>Vitrified clay pipe systems |

## PRODUCT

| OFFICIAL NAME | COMMERCIAL NAME |
|---|---|
| **PIPES, FITTINGS AND JOINTS** | **VITRIFIED CLAY SOCKETED PIPES AND GA, GZ** |

### CAPTION ON THE PRODUCT

BENOR
Production date
Production unit
EN 295-1
PTV 895-1
Nominal size (DN...)
Joint system
Crushing strength FN in kN/m
Bending moment resistance in kNm (if applicable)

### APPLICATION

- ☑ CCT/TB 2015
- ☑ PTV 895-1 (3.0)
- ☑ EN 295-1 (2013)
- ☑ CCT Qualiroutes (2017)
- ☑ SB 250 - versie 4.1
- ☑ CCT Qualiroutes (2021)
- ☑ SB 250 - versie 4.1 + errata

This product was not checked according to the crossed-out reference documents or does not comply with them.

**Use:** Drains and sewers.

## EXPLANATIONS (THIS DOES NOT COME UNDER SUPERVISION IN THE CONTEXT OF BENOR CERTIFICATION)

### ATTENTION POINTS - TO BE CHECHED BY CUSTOMER (NOT LIMITED)

* Is there a delivery note for each delivery?
* Is there reference to the technical data sheet on the delivery document?
* Does the technical data sheet code mentioned on the delivery note correspond with the code mentioned on the product?
* Does the product meet the requirements from the tender?

FORM OF DELIVERY

EXTRA INFORMATION

* In case vulcanized rubber sealing elements are supplied as separate components, they should be marked with reference to PTV 8681-1 and the classification for high chemical resistance.
* Coupling materials such as polypropylene sleeve couplings should be marked with reference to PTV 895-1.
* The KeraMat Lubricant shall be used for all vitrified clay joint systems.

**Contact at**

| | | | |
|---|---|---|---|
| *** COPRO:** | Koen Van Daele | +32 2 468 00 95 | koen.vandaele@copro.eu |
| *** Certificate holder:** | René van Veldhoven | +32 11 21 02 32 | rene.vanveldhoven@wienerberger.com |


## PRODUCT CHARACTERISTICS

| GENERAL REQUIREMENTS | ACCORDING | UNIT | VALUE | MIN | MAX |
|---|---|---|---|---|---|
| Water absorption | PTV 895-1, Clause 3.4.2 | % | - | - | 6 |
| Appearance | PTV 895-1, Clause 3.4.3 | | Glazed | - | - |
| **DIMENSIONAL REQUIREMENTS** | **ACCORDING** | **UNIT** | **VALUE** | **MIN** | **MAX** |
| Internal diameter (*) | PTV 895-1, Clause 3.4.4 | mm | See drawing | - | - |
| Length (*) | PTV 895-1, Clause 3.4.5 | m | See drawing | - | - |
| Squareness of ends (*) | PTV 895-1, Clause 3.4.6 | mm | See drawing | - | - |
| Deviation from straightness (*) | PTV 895-1, Clause 3.4.7 | mm/m | See drawing | - | - |
| **OTHER REQUIREMENTS** | **ACCORDING** | **UNIT** | **VALUE** | **MIN** | **MAX** |
| Crushing strength (*) | PTV 895-1, Clause 3.4.11 | kN/m | See drawing | - | - |
| Bending tensile strength | PTV 895-1, Clause 3.4.12 | $N/mm^2$ | - | 18 | - |
| Bending moment resistance (*) | PTV 895-1, Clause 3.4.13 | kNm | See drawing | - | - |
| Fatigue strength under cyclic load | PTV 895-1, Clause 3.4.15 | | Pass | - | - |
| Watertightness of pipes and junctions (*) | PTV 895-1, Clause 3.4.16 | | Pass | - | - |
| Chemical resistance (*) | PTV 895-1, Clause 3.4.17 | % | - | - | 0.15 |
| Hydraulic roughness | PTV 895-1, Clause 3.4.18 | | Pass | - | - |
| Abrasion resistance | PTV 895-1, Clause 3.4.19 | Class | AH | - | 0.25 |
| Airtightness (*) | PTV 895-1, Clause 3.4.20 | | Pass | - | - |

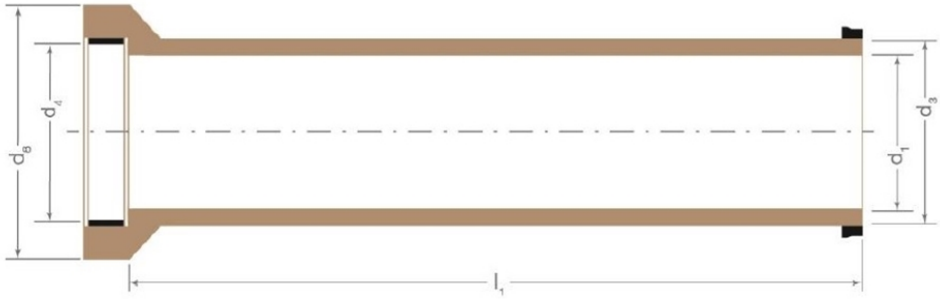
| | | | | | |
|---|---|---|---|---|---|
| Resistance against high pressure water jetting (*) | PTV 895-1, Clause 3.4.22 | | Pass | - | - |
| REQUIREMENTS FOR JOINT ASSEMBLIES | ACCORDING | UNIT | VALUE | MIN | MAX |
| Watertightness of joint assemblies (*) | PTV 895-1, Clause 3.5.2 | | - | - | - |
| *Under deflection* | | mm | See drawing | - | - |
| *Under shear load* | | | Pass | - | - |
| Increased watertightness of jointed pipes at 1 bar | PTV 895-1, Clause 3.5.3 | | Pass | - | - |
| Continuity of invert in joint assemblies (*) | PTV 895-1, Clause 3.5.4 | | See drawing | - | - |
| Joint interchangeability of pipes and fittings (*) | PTV 895-1, Clause 3.5.5 | | - | - | - |
| *Jointing system* | | Class | See drawing | - | - |
| Chemical and physical resistance to effluent (*) | PTV 895-1, Clause 3.5.6 | Class | CH | - | - |
| Thermal cycling stability of joint assemblies (*) | PTV 895-1, Clause 3.5.7 | | Pass | - | - |
| Long-term thermal stability of joint assemblies (*) | PTV 895-1, Clause 3.5.8 | | Pass | - | - |
| Airtightness of jointed pipes | PTV 895-1, Clause 3.5.9 | | Pass | - | - |

(*) These product characteristics are a statement by the producer taken from its declaration of performance. The certificate holder declares that the values listed are in accordance with its declaration of performance.

## TECHNICAL DRAWING

| Nominale diameter | Verbindings-systeem | Maten | | Lengte | | Maximale kromheid | | Haaksheid uiteinden | Bodemgelijkheid | Kruindruk-weerstand | Sterkte-klasse | Hoek-verdraaiing |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nominal size | Joint system | Dimensions | | Length | | Maximum deviation from straigthness | | Squareness of ends | Continuity of invert in joint assemblies | Crushing strength | Strength class | Angular deflection |
| Diamètre nomimal | Système d'assemblage | Dimension | | Longueur | | Flèche maximale | | Équerrage des extrémités | Continuité du fil d'eau dans les assemblages | Résistance à l'écrasement | Classe de résistance | Déviation angulaire |
| DN | | binnenkant buis inner pipe intérieur tuyaux $d_1$ mm | binnenkant mof inner socket intérieur du collet $d_4$ mm | $l_1$ Buis Pipe Tuyaux cm | | Buis Pipe Tuyaux 200 cm mm | Buis Pipe Tuyaux 250 cm mm | Buis Pipe Tuyaux mm | mm | FN kN/m | | mm/m |
| 250 | C | 250 ± 6 | 317,5 ± 0,5 | - | 250 | - | 10 | ≤ 6 | ≤ 4 | 40 | 160 | 50 |
| | | | 341,5 ± 0,5 | | | | | | | 60 | 240 | |
| 300 | | 300 ± 7 | 371,5 ± 0,5 | | | | | | | 48 | 160 | |
| | | | 398,5 ± 0,5 | | | | | | | 72 | 240 | |
| 350 | | 348 ± 7 | 433,5 ± 0,5 | | | | 7,5 | ≤ 7 | | 56 | 160 | |
| 400 | | 398 ± 8 | 507,5 ± 0,5 | | | | | ≤ 8 | | 64 | | |
| | | | 515,5 ± 0,5 | | | | | | | 80 | 200 | |
| 500 | | 496 ± 9 | 605 ± 0,5 | | | | | ≤ 10 | ≤ 5 | 60 | 120 | |
| | | | 637 ± 0,5 | | | | | | | 80 | 160 | |
| 600 | | 597 ± 12 | 720 ± 0,5 | | | | | ≤ 12 | ≤ 6 | 57 | 95 | 30 |
| | | | 758 ± 0,5 | | | | | | | 96 | 160 | |
| 700 | | 696 ± 14 | 871 ± 0,5 | 200 | - | 6 | - | ≤ 14 | ≤ 7 | 84/112 | 120 | |
| 800 | | 796 ± 16 | 976 ± 0,5 | | | | | ≤ 16 | ≤ 8 | 96 | | |

**Buis verbindingssysteem C / Pipe jointing system C / Tuyaux système d'assemblage C**




| Nominale diameter | Verbindings-systeem | Maten | | Lengte | Maximale kromheid | Haaksheid uiteinden | Bodemgelijkheid | Kruindruk-weerstand | Sterkte-klasse | Hoek-verdraaiing |
|---|---|---|---|---|---|---|---|---|---|---|
| Nominal size | Joint system | Dimensions | | Length | Maximum deviation from straigthness | Squareness of ends | Continuity of invert in joint assemblies | Crushing strength | Strength class | Angular deflection |
| Diamètre nomimal | Système d'assemblage | Dimension | | Longueur | Flèche maximale | Équerrage des extrémités | Continuité du fil d'eau dans les assemblages | Résistance à l'écrasement | Classe de résistance | Déviation angulaire |
| DN | | binnenkant buis inner pipe intérieur tuyaux $d_1$ mm | binnenkant mof inner socket intérieur du collet $d_4$ mm | $l_1$ GA GZ cm | GA GZ mm | GA GZ mm | mm | FN kN/m | | mm/m |
| 200 | C | 200 ± 5 | 260 ± 0,5 | 60 | 2,4 | ≤ 6 | ≤ 4 | 40 | 200 | 100 |
| | | | 275 ± 0,5 | | | | | | 200/240 | |
| | | | | | | | | 48 | 240 | |
| 250 | | 250 ± 6 | 317,5 ± 0,5 | | | | | 40 | 160 | 50 |
| | | | | | | | | | 160/240 | |
| | | | 341,5 ± 0,5 | | | | | 60 | 240 | |
| 300 | | 300 ± 7 | 371,5 ± 0,5 | | | | | 48 | 160 | |
| | | | | | | | | | 160/240 | |
| | | | 398,5 ± 0,5 | | | | | 72 | 240 | |
| 350 | | 348 ± 7 | 433,5 ± 0,5 | 75 | 2,25 | ≤ 7 | | 56 | 160 | |
| 400 | | 398 ± 8 | 507,5 ± 0,5 | | | ≤ 8 | | 64 | | |
| | | | | | | | | | 160/200 | |
| | | | 515,5 ± 0,5 | | | | | 80 | 200 | |
| 500 | | 496 ± 9 | 605 ± 0,5 | | | ≤ 10 | ≤ 5 | 60 | 120 | |
| | | | | | | | | | 120/160 | |
| | | | 637 ± 0,5 | | | | | 80 | 160 | |
| 600 | | 597 ± 12 | 720 ± 0,5 | | | ≤ 12 | ≤ 6 | 57 | 95 | 30 |
| | | | | | | | | | 95/160 | |
| | | | 758 ± 0,5 | | | | | 96 | 160 | |
| 700 | | 696 ± 14 | 871 ± 0,5 | | | ≤ 14 | ≤ 7 | 84/112 | 120 | |
| 800 | | 796 ± 16 | 976 ± 0,5 | | | ≤ 16 | ≤ 8 | 96 | | |

**GA verbindingssysteem C / GA jointing system C / GA système d'assemblage C**


**GZ verbindingssysteem C / GZ jointing system C / GZ système d'assemblage C**

## ATTESTATION

The BENOR certification of the product states that there is, on the basis of a periodic external supervision, a sufficient degree of confidence that the certificate holder is in a position to continuously guarantee the conformity of the product as specified in the reference documents and TRA 95 BENOR (3.0).
This datasheet contains the performance characteristics specified by the manufacturer. The datasheet is verified by the certification body.
The certificate holder declares that the product supplier/delivered by it conforms to the datasheet as set out on the delivery note.

By making it available digitally, the producer declares that he agrees with this sheet

**Name:** Rene van Veldhoven
**Date:** 3/02/2026

COPRO

**Name:** Koen Van Daele
**Date:** 3/02/2026
**Signature:**

COPRO NPO - Z.1 Researchpark - Kranenberg 190 - B-1731
Zellik