



technical sheet

## CERTIFICATION OF

# VITRIFIED CLAY PIPE SYSTEMS

BENOR

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The validity of this technical data sheet can be checked on  
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TECHNICAL DATA SHEET		
QUICK CODE	VERSION	VALIDITY
<b>0001/0001</b>	<b>5.0 - 22/01/2024</b>	<b>CERTIFIED</b>
CERTIFICATE HOLDER	PRODUCTION UNIT	CERTIFICATE NUMBER
STEINZEUG-KERAMO 'WERK 2' Paalsteenstraat 36 BE-3500 Hasselt +32 11 21 02 32 <a href="mailto:info@steinzeug-keramo.com">info@steinzeug-keramo.com</a>	STEINZEUG-KERAMO 'WERK 2' Paalsteenstraat 36 BE-3500 Hasselt +32 11 21 02 32 <a href="mailto:info@steinzeug-keramo.com">info@steinzeug-keramo.com</a>	BENOR 001/95 Vitrified clay pipe systems

PRODUCT	
OFFICIAL NAME	COMMERCIAL NAME
<b>PIPES, FITTINGS AND JOINTS</b>	<b>VITRIFIED CLAY SOCKETED PIPES AND GA, GZ</b>

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
<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> CCT/TB 2015</li> <li><input checked="" type="checkbox"/> CCT Qualiroutes (2017)</li> <li><input checked="" type="checkbox"/> SB 250 - versie 4.1</li> <li><input checked="" type="checkbox"/> CCT Qualiroutes (2021)</li> <li><input checked="" type="checkbox"/> SB 250 - versie 4.1 + errata</li> </ul> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <span><input checked="" type="checkbox"/> PTV 895-1 (3.0)</span> <span><input checked="" type="checkbox"/> EN 295-1 (2013)</span> </div> <p>This product was not checked according to the crossed-out reference documents or does not comply with them.</p> <p><b>Use:</b> Drains and sewers.</p>

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

ATTENTION POINTS - TO BE CHECKED 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

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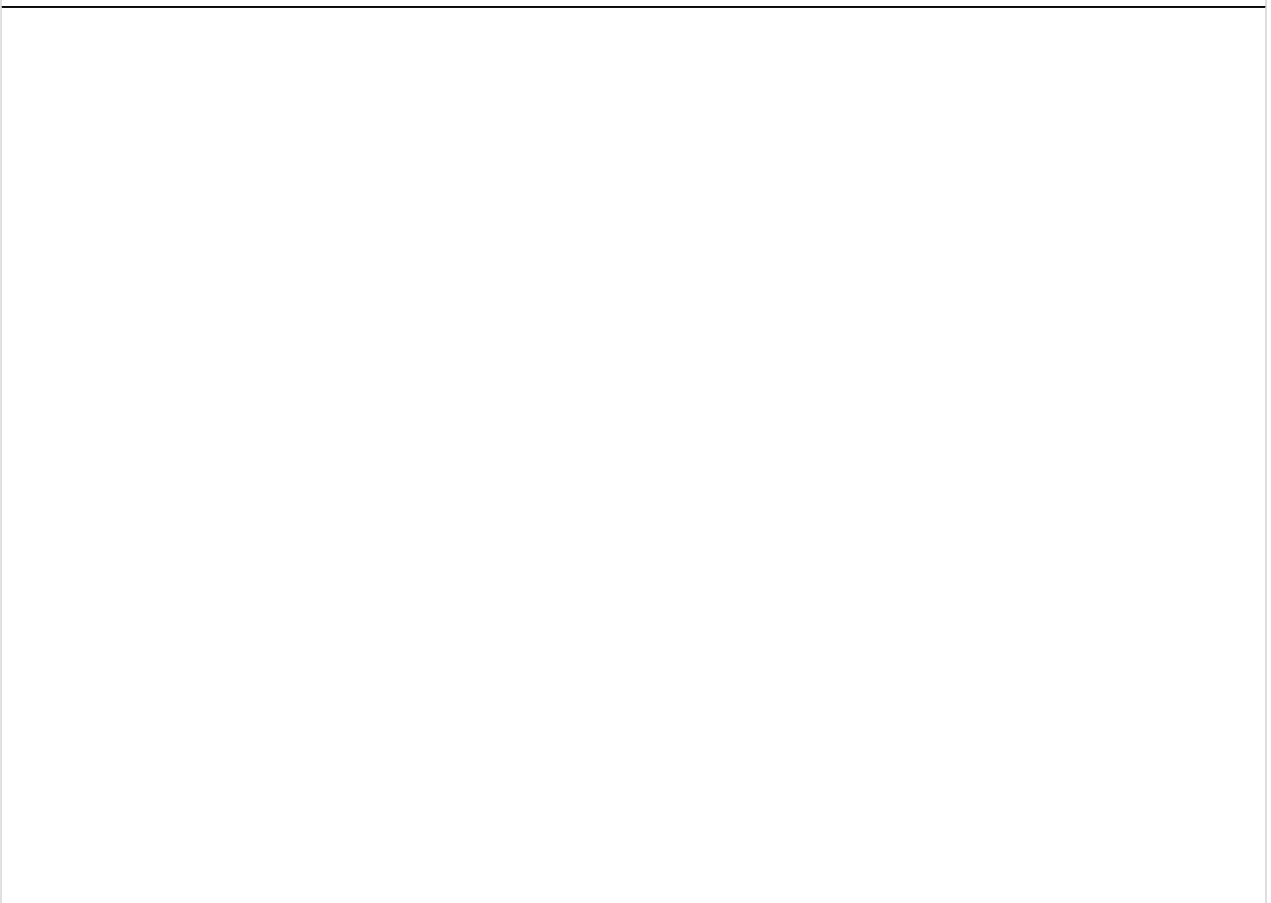
## PRODUCT CHARACTERISTICS

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 <sup>2</sup>	-	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	-	-
<b>REQUIREMENTS FOR JOINT ASSEMBLIES</b>	<b>ACCORDING</b>	<b>UNIT</b>	<b>VALUE</b>	<b>MIN</b>	<b>MAX</b>
Watertightness of joint assemblies (*)	PTV 895-1, Clause 3.5.2		-	-	-
<i>Under deflection</i>		mm	See drawing	-	-
<i>Under shear load</i>			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		-	-	-
<i>Jointing system</i>		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	-	-

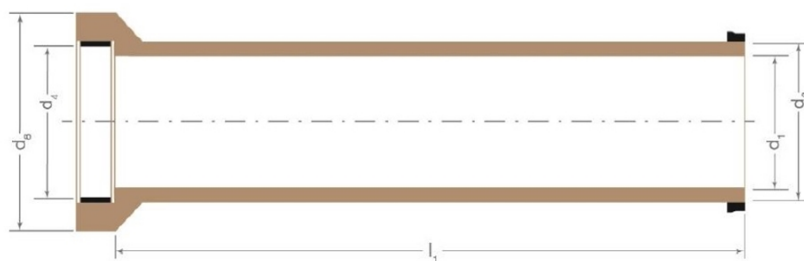
(\*) These product characteristics are a statement by the producer taken from its declaration of performance. The certificate holder declares that the values listed are in accordance with its declaration of performance.

## TECHNICAL DRAWING



Nominale diameter	Verbindings-systeem	Maten		Lengte	Maximale kromheid		Haaksheid uiteinden		Bodemgelijkheid	Kruindruk-weerstand	Sterkte-klasse	Weerstand bij buigmoment	Hoek-verdraaiing				
Nominal size	Joint system	Dimensions		Length	Maximum deviation from straightness		Squareness of ends		Continuity of invert in joint assemblies	Crushing strength	Strength class	Bending moment resistance	Angular deflection				
Diamètre nominal	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	Résistance au moment de flexion	Déviatión angulaire				
DN		binnenkant buis inner pipe intérieur tuyaux d <sub>1</sub> mm	binnenkant mof inner socket intérieur du collet d <sub>4</sub> mm	I <sub>1</sub>		Buis Pipe Tuyaux		GA GZ	Buis Pipe Tuyaux	GA GZ	mm	FN	kNm	mm/m			
				Tuyaux	cm	cm	cm								200 cm	250 cm	mm
200	C	200 ± 5	260 ± 0,5	-	-	-	-	-	-	-	-	-	40	200	≥ 12	100	
			275 ± 0,5										48	240	≥ 14		
250		250 ± 6	317,5 ± 0,5	200	60	8	10	2,4	≤ 6	-	-	-	-	40	160	-	50
			341,5 ± 0,5											60	240		
300		300 ± 7	371,5 ± 0,5	250	75	-	7,5	2,25	≤ 7	-	-	-	-	48	160		
			398,5 ± 0,5											72	240		
350		348 ± 7	433,5 ± 0,5	-	-	-	-	-	≤ 8	-	-	-	-	56	160		
		433,5 ± 0,5	64											200			
400		398 ± 8	507,5 ± 0,5	-	-	-	-	-	≤ 10	-	-	-	-	80	200		
		515,5 ± 0,5	60											120			
500		496 ± 9	605 ± 0,5	-	-	-	-	-	≤ 12	-	-	-	-	80	160		
		637 ± 0,5	57											95			
600	597 ± 12	720 ± 0,5	200	-	-	-	-	≤ 14	-	-	-	-	96	160			
	758 ± 0,5	112											120				
700	696 ± 14	871 ± 0,5	-	-	-	-	-	≤ 16	-	-	-	-	112	120			
	796 ± 16	976 ± 0,5											96	120			

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



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 (2.0), 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: René van Veldhoven

Date: 22/01/2024

COPRO

**Name:** Koen Van Daele

**Date:** 22/01/2024

**Signature:**



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