



technical sheet

CERTIFICATION OF

VITRIFIED CLAY PIPE SYSTEMS

BENOR

This technical data sheet was printed on 6/06/2025.
The validity of this technical data sheet can be checked on
<http://extranet.copro.eu/>



TECHNICAL DATA SHEET

QUICK CODE	VERSION	VALIDITY
0021/0008	10.1 - 28/05/2024	CERTIFIED
CERTIFICATE HOLDER	PRODUCTION UNIT	CERTIFICATE NUMBER
EURO SWEILLEM Stiegstrasse 60 D-41379 Brüggen-Bracht +49 2 15 71 28 64 11 info@euro-sweillem.de	SWEILLEM VITRIFIED CLAY PIPES CO. 6 El-Saad Street, Khalafawi Square EG-11614 Cairo +20 2 22 06 50 97 mostafa.sweillem@sweillem.net	BENOR 021/95 Vitrified clay pipe systems

PRODUCT

OFFICIAL NAME	COMMERCIAL NAME
PIPES, FITTINGS AND JOINTS	GLAZED JUNCTION 90°

CAPTION ON THE PRODUCT

BENOR
Production date
Production unit
EN 295-1
PTV 895-1
Nominal size (DN...)
Joint system
Angle

APPLICATION

- | | | |
|--|---|---|
| ☒ SB 250 - versie 3.1 | ☒ PTV 895-1 (3.0) | ☒ EN 295-1 (2013) |
| ☒ CCT/TB 2015 | | |
| ☒ CCT Qualiroutes (2017) | | |
| ☒ 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 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

Wooden box

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.

Contact at

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 * **Certificate holder:** Uwe Bormann +49 2 15 71 28 64 Uwe.bormann@euro-sweillem.de
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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	Pass	-	-
Branch angle of junctions (*)	PTV 895-1, Clause 3.4.10	°	90°	-	-
OTHER REQUIREMENTS	ACCORDING	UNIT	VALUE	MIN	MAX
Bond strength of adhesive for fixing clay parts	PTV 895-1, Clause 3.4.14		-	-	-
<i>Minimum bending tensile strength of the bond</i>		N/mm ²	-	5	-
<i>Minimum strength after immersion</i>		N/mm ²	-	5	-
Watertightness of pipes and junctions (*)	PTV 895-1, Clause 3.4.16		Pass	-	-
Chemical resistance (*)	PTV 895-1, Clause 3.4.17	%	-	-	0,25
Abrasion resistance	PTV 895-1, Clause 3.4.19	Class	AH	-	-
Airtightness (*)	PTV 895-1, Clause 3.4.20		Pass	-	-
Tightness of fittings (*)	PTV 895-1, Clause 3.4.21		-	-	-
<i>Airtightness</i>			Pass	-	-
<i>Watertightness</i>			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		Pass	-	-
Joint interchangeability of pipes and fittings (*)	PTV 895-1, Clause 3.5.5		Pass	-	-
Jointing system		Class	C, F	-	-
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	-	-
(*) 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

N JUNCTION 90° NORMAL STRENGTH

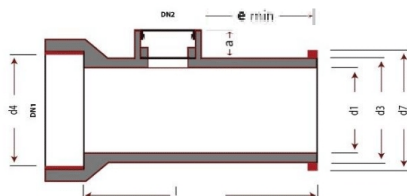
Nominal size DN1/DN2 (mm)	Joint (-)	Strength class TKL (-)	INNER ø d1 ± Tolerance (mm)	OUTER ø d3 ± Tolerance (mm)	Socket inner ø d4 ± Tolerance (mm)	Joint spigot outer ø d7 ± Tolerance (mm)	Measurement a max (mm)	Measurement emin (mm)	Length l1 (m)	WEIGHT ** (KG/PCS)
125/125	F/F	- / -	126 ± 4 / 126 ± 4	159 ± 2 / 159 ± 2	- / -	- / -	160	70	0.50	15
150/150	F/F	- / -	151 ± 5 / 151 ± 5	186 ± 2 / 186 ± 2	- / -	- / -	160	75	0.50	18
200/150	F/F	200 / -	200 ± 5 / 151 ± 5	242 ± 3 / 186 ± 2	- / -	- / -	170	85	0.50	27
200/150	C/F	200 / -	200 ± 5 / 151 ± 5	-----/ 186 ± 2	260 ± 0.5 / -	263 ± 0.5 / -	170	85	0.50	27
200/200	F/F	200 / 200	200 ± 5 / 200 ± 5	242 ± 3 / 242 ± 3	- / -	- / -	180	85	0.60	33
200/200	C/C	200 / 200	200 ± 5 / 200 ± 5	-----/ 159 ± 2	260 ± 0.5 / 260 ± 0.5	263 ± 0.5 / 263 ± 0.5	180	85	0.60	33
250/125	C/F	160 / -	250 ± 6 / 126 ± 4	-----/ 159 ± 2	317.5 ± 0.5 / -	320 ± 0.5 / -	170	85	0.50	41
250/150	C/F	160 / -	250 ± 6 / 151 ± 5	-----/ 186 ± 2	317.5 ± 0.5 / -	320 ± 0.5 / -	170	85	0.50	41
250/200	C/F	160 / 200	250 ± 6 / 200 ± 5	-----/ 242 ± 3	317.5 ± 0.5 / -	320 ± 0.5 / -	180	85	0.60	46
250/200	C/C	160 / 200	250 ± 6 / 200 ± 5	-----/ 186 ± 2	317.5 ± 0.5 / 260 ± 0.5	320 ± 0.5 / -	180	85	0.60	46
300/150	C/F	160 / -	300 ± 7 / 151 ± 5	-----/ 186 ± 2	371.5 ± 0.5 / -	374.5 ± 0.5 / -	170	85	0.50	46
300/200	C/F	160 / 200	300 ± 7 / 200 ± 5	-----/ 242 ± 3	371.5 ± 0.5 / -	374.5 ± 0.5 / -	200	85	0.60	53
300/200	C/C	160 / 200	300 ± 7 / 200 ± 5	-----/ 186 ± 2	371.5 ± 0.5 / 260 ± 0.5	374.5 ± 0.5 / -	200	85	0.60	53
400/150	C/F	160 / -	398 ± 8 / 151 ± 5	-----/ 186 ± 2	507.5 ± 0.5 / -	510.5 ± 0.5 / -	--	85	1.00	148
400/200	C/F	160 / 200	398 ± 8 / 200 ± 5	-----/ 242 ± 3	507.5 ± 0.5 / -	510.5 ± 0.5 / -	--	85	1.00	152
400/200	C/C	160 / 200	398 ± 8 / 200 ± 5	-----/ 186 ± 2	507.5 ± 0.5 / 260 ± 0.5	510.5 ± 0.5 / 263 ± 0.5	--	85	1.00	152
500/150	C/F	120 / -	496 ± 9 / 151 ± 5	-----/ 186 ± 2	605 ± 0.5 / -	608 ± 0.5 / -	--	95	1.00	188
500/200	C/F	120 / 200	496 ± 9 / 200 ± 5	-----/ 242 ± 3	605 ± 0.5 / -	608 ± 0.5 / -	--	95	1.00	191
500/200	C/C	120 / 200	496 ± 9 / 200 ± 5	-----/ 186 ± 2	605 ± 0.5 / 260 ± 0.5	608 ± 0.5 / 263 ± 0.5	--	95	1.00	191
600/150	C/F	95 / -	597 ± 12 / 151 ± 5	-----/ 186 ± 2	720 ± 0.5 / -	723 ± 0.5 / -	--	95	1.00	248
600/200	C/F	95 / 200	597 ± 12 / 200 ± 5	-----/ 242 ± 3	720 ± 0.5 / -	723 ± 0.5 / -	--	95	1.00	251
600/200	C/C	95 / 200	597 ± 12 / 200 ± 5	-----/ 186 ± 2	720 ± 0.5 / 260 ± 0.5	723 ± 0.5 / 263 ± 0.5	--	95	1.00	251

H JUNCTION 90° EXTRA STRENGTH

Nominal size DN1/DN2 (mm)	Joint (-)	Strength class TKL (-)	INNER ø d1 ± Tolerance (mm)	OUTER ø d3 ± Tolerance (mm)	Socket inner ø d4 ± Tolerance (mm)	Joint spigot outer ø d7 ± Tolerance (mm)	Measurement a max (mm)	Measurement emin (mm)	Length l1 (m)	WEIGHT ** (KG/PCS)
200/150	C/F	240 / -	200 ± 5 / 151 ± 5	-----/ 186 ± 2	275 ± 0.5 / -	278.4 ± 0.5 / -	170	85	0.50	33
200/200	C/C	240 / 240	200 ± 5 / 200 ± 5	-----/ 186 ± 2	275 ± 0.5 / 275 ± 0.5	278.4 ± 0.5 / 278.4 ± 0.5	180	85	0.60	39
250/150	C/F	240 / -	250 ± 6 / 151 ± 5	-----/ 186 ± 2	341.5 ± 0.5 / -	344.9 ± 0.5 / -	170	85	0.50	48
250/200	C/F	240 / 200	250 ± 6 / 200 ± 5	-----/ 242 ± 3	341.5 ± 0.5 / -	344.9 ± 0.5 / -	180	85	0.60	55
250/200	C/C	240 / 200	250 ± 6 / 200 ± 5	-----/ 186 ± 2	341.5 ± 0.5 / 260 ± 0.5	344.9 ± 0.5 / 263 ± 0.5	180	85	0.60	55
300/150	C/F	240 / -	300 ± 7 / 151 ± 5	-----/ 186 ± 2	398.5 ± 0.5 / -	401.9 ± 0.5 / -	170	85	0.50	60
300/200	C/F	240 / 200	300 ± 7 / 200 ± 5	-----/ 242 ± 3	398.5 ± 0.5 / -	401.9 ± 0.5 / -	200	85	0.60	72
300/200	C/C	240 / 200	300 ± 7 / 200 ± 5	-----/ 186 ± 2	398.5 ± 0.5 / 260 ± 0.5	401.9 ± 0.5 / 263 ± 0.5	200	85	0.60	72
400/150	C/F	200 / -	398 ± 8 / 151 ± 5	-----/ 186 ± 2	515.5 ± 0.5 / -	518.7 ± 0.5 / -	--	85	1.00	175
400/200	C/F	200 / 200	398 ± 8 / 200 ± 5	-----/ 242 ± 3	515.5 ± 0.5 / -	518.7 ± 0.5 / -	--	85	1.00	178
400/200	C/C	200 / 200	398 ± 8 / 200 ± 5	-----/ 186 ± 2	515.5 ± 0.5 / 260 ± 0.5	518.7 ± 0.5 / 263 ± 0.5	--	85	1.00	178
500/150	C/F	160 / -	496 ± 9 / 151 ± 5	-----/ 186 ± 2	637 ± 0.5 / -	640.2 ± 0.5 / -	--	95	1.00	238
500/200	C/F	160 / 200	496 ± 9 / 200 ± 5	-----/ 242 ± 3	637 ± 0.5 / -	640.2 ± 0.5 / -	--	95	1.00	242
500/200	C/C	160 / 200	496 ± 9 / 200 ± 5	-----/ 186 ± 2	637 ± 0.5 / 260 ± 0.5	640.2 ± 0.5 / 263 ± 0.5	--	95	1.00	242
600/150	C/F	160 / -	597 ± 12 / 151 ± 5	-----/ 186 ± 2	758 ± 0.5 / -	761.6 ± 0.5 / -	--	95	1.00	331
600/200	C/F	160 / 200	597 ± 12 / 200 ± 5	-----/ 242 ± 3	758 ± 0.5 / -	761.6 ± 0.5 / -	--	95	1.00	334
600/200	C/C	160 / 200	597 ± 12 / 200 ± 5	-----/ 186 ± 2	758 ± 0.5 / 260 ± 0.5	761.6 ± 0.5 / 263 ± 0.5	--	95	1.00	334
700/150	C/F	120 / -	696 ± 14 / 151 ± 5	-----/ 186 ± 2	871 ± 0.5 / -	875 ± 0.5 / -	--	95	1.00	380
800/150	C/F	120 / -	796 ± 16 / 151 ± 5	-----/ 186 ± 2	976 ± 0.5 / -	979 ± 0.5 / -	--	95	1.00	485

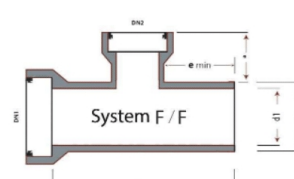
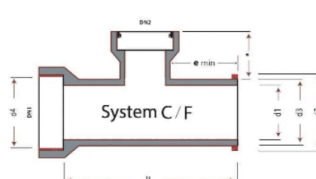
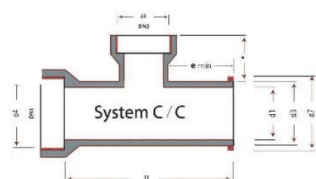
Is not a requirement from PTV 895-1

Joint System C: d3 & d7 Measurements are not covered by PTV 895-1



Compact Junction

Maximal deflection	
Dn	Deflection mm
100 ≤ DN ≤ 200	80
200 < DN ≤ 500	30
500 < DN ≤ 800	20
DN > 800	10



Normal Junction



Datasheet Junction 90° | Quick Code: 0021/0008

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: Uwe Bormann

Date: 7/02/2024

COPRO

Name: Koen Van Daele

Date: 22/01/2024

Signature:



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