

Place and date of initial registration	Dresden, Mai 2019 (Germany)	
Dimension range	DN 200 – DN 600	
Wall thickness in cured condition	3,5 mm / 4,5 mm / 5,4 mm	
Number of layers	minimum 3	
Longitudinal seam	none	
Winding	none	
Permissible elongation	3 %	
Liner construction as outlined in	DIBt approval, appendix 1 and 2	
Specific density according to DIN EN ISO 1183-2	1.6 g/cm ³ ± 0.5 g/cm ³	
Glass content according to DIN EN ISO 1172	≥ 50% (by mass)	
Mean abrasion depth after 100,000 load cycles according to DIN-EN 295-3 (Darmstadt tipping trough)	0,09 mm	
Barcol hardness according to DIN EN 59	≥ 40 IRHD	
Application	municipal wastewater, rainwater, sewage	
Dimension groups	≤ DN 200	> DN 200
Short-term circumferential E-Modulus according to DIN EN 1228 DIN EN ISO 11296-4:2011	≥ 8,200 N/mm ²	≥ 15,700 N/mm ²
Long-term circumferential E-Modulus* _{ex 50 years} according to DIN EN 761	5,942 N/mm ²	11,893 N/mm ²
Short-term bending E-Modulus according to DIN EN ISO 178 and DIN EN ISO 11296-4:2011	≥ 8,500 N/mm ²	≥ 13,750 N/mm ²
Short-term bending strength according to DIN EN ISO 178 and DIN EN ISO 11296-4:2011	≥ 273 N/mm ²	≥ 152 N/mm ²
Long-term bending strength* _{ex 50 years} according to DIN EN 761	197 N/mm ²	115 N/mm ²
Reduction factor A* after 10 000 h according to DIN EN 761	1.38	1.32
Creep behavior after 24 h according to DIN EN ISO 899-2	≤ 7 %	≤ 7 %
Material characteristics group according to DWA M 144-3	12	16

* These values are used for the static calculation of the Liner stability according to DWA-A 143-2.

Status: 05th May 2023

Currently available nominal widths and wall thicknesses

DN (mm)	Structural wall thickness
225	On request
250	3,5 mm
300	3,5 mm
400	4,5 mm
500	5,4 mm
600	5,4 mm

Nominal widths and wall thicknesses available in the future

DN (mm)	Structural wall thickness
225	3 mm, 4 mm
250	3 mm, 4 mm
300	3 mm, 4 mm
400	3 mm, 4 mm, 5mm
500	3 mm, 4 mm, 5 mm, 6 mm
600	3 mm, 4mm, 5 mm, 6 mm