

**Product data sheet**  
**SAERTEX-LINER® H<sub>2</sub>O, TYPE S+XR**

As of: February 2023

GENERAL INFORMATION							
Product group	GFRP LINER supply						
Product range	SAERTEX-LINER® H <sub>2</sub> O						
Design	Type S+XR						
Utilization	Potable water						
Approvals	DVGW-W270, KTW, NSF/ANSI Standard 61 and others*						
Reinforcing material	multiaxial fabric made of glass fiber						
Resin type	styrene-free vinyl ester resin (SFVE)						
Impregnation	pre-impregnated at the factory						
Installation procedure	light-curing pipe lining (UV-CIPP)						
Placement procedure	pulling in						
Inflation procedure	compressed air						
Shelf life	<table border="1"> <tr> <td>6 months:</td> <td>3 months:</td> </tr> <tr> <td>- WD ≤ 8.3 mm</td> <td>- WD &gt; 8.3 mm</td> </tr> <tr> <td>- 7°C - 18°C</td> <td>- 7°C - 14°C</td> </tr> </table>	6 months:	3 months:	- WD ≤ 8.3 mm	- WD > 8.3 mm	- 7°C - 18°C	- 7°C - 14°C
6 months:	3 months:						
- WD ≤ 8.3 mm	- WD > 8.3 mm						
- 7°C - 18°C	- 7°C - 14°C						
Pressure table	available						
EC Safety Data Sheet	available						

\* Australia, New Zealand, Brazil, China, Israel, Poland, Slovakia, Spain, Italy, Czech Republic etc.

DESIGN CHARACTERISTICS	
maximum operating pressure (MDP)	33 bar
Host pipe profile	circular
Diameter range	DN 250 - 1200
structural wall thickness	4.3 mm-12.3 mm, in 1 mm steps
structural classification according to DIN EN ISO 11295/ AWWA M28	Class A/Class IV: independent - fully statically loadable
Wall mounting	analog DIBt approval Z-42.3-350, Annex 1 and 2, abZ/AB

As of: February 2023

FOILS	
Inner foils with barrier function	Hygienic
- Remains in the liner	Permanent
- Materials	PE/PA, nonwoven PET
- Thickness	up to 400 µm
Protective outer gliding foil, UV light protection**, integrated	
- Material	PVC, fabric reinforced in places
- Thickness	up to 500 µm
Permanent outer foil with barrier function	
- Material	PE/PA/PE and nonwoven PP
- Thickness	up to 200 µm

\*\*Up to DN 600 and max. 2.5 t liner weight and corresponding condition of host pipe installation possible without additional gliding foil.

Notes (terms ISO 11296- 4):

- temporary: Foil takes over function during installation and must be removed afterwards
- semi-permanent: Foil takes over function during installation and remains in the liner
- permanent: Foil takes over function during installation and also in operation and remains in the liner

MECHANICAL CHARACTERISTICS	
Short-term circumferential E modulus according to DIN EN 1228 // DIN EN ISO 11296-4:2011	≥ 20.500 N/mm <sup>2</sup>
Short-term bending E modulus according to DIN EN ISO 11296-4:2011 // DIN EN ISO 178	≥ 16.800 N/mm <sup>2</sup>
Short-term bending stress according to DIN EN ISO 11296-4:2011 // DIN EN ISO 178	≥ 270 N/mm <sup>2</sup>
Long-term circumferential E modulus*** <sub>ex 50 years</sub> according to DIN EN 761	16.000 N/mm <sup>2</sup>
Long-term bending stress E modulus*** <sub>ex 50 years</sub> according to DIN EN 761	210 N/mm <sup>2</sup>
Reduction factor A after 10,000 hours according to DIN EN 761	1.28
Creep tendency after 24 hours according to DIN EN ISO 899-2	≤ 6 %

\*\*\* These values are used for the static calculation of the liner's stability according to DWA-A 143-2.

As of: February 2023

COMPOSITE	
Glass fiber type according to DIN 61850	permanently corrosion and chemical resistant, ECR
Number of layers multiaxial fabric	at least 3
Glass area weight per mm wall thickness	1210 g/m <sup>2</sup> ± 150 g/m <sup>2</sup>
specific density according to DIN EN ISO 1183-2	1.6 g/cm <sup>3</sup> ± 0.5 g/cm <sup>3</sup>
Glass content according to DIN EN ISO 1172	≥ 46 % (mass-based)
Barcol hardness according to DIN EN 59	≥ 40 IRHD
longitudinal seam	Yes
Winding	No