

Product data sheet
SAERTEX-LINER® MULTI, TYP S+, FASTPLUS

As of: February 2023

GENERAL INFORMATION	
Product group	GRP LINER - Gravity
Product range	SAERTEX-LINER® MULTI
Design	Type S+
Application	Municipal wastewater, storm water, sewage
Reinforcing material	Multiaxial fabric made of ECR glass
Resin type	Unsaturated polyester resins (UP)
Wet out (Saturation)	Fully wet out at the factory
Curing procedure	UV light - cured in place pipe (UV-CIPP)
Installation procedure	Pull in place
Inflation procedure	Compressed air
Safety Data Sheet	Available upon request

SHELF-LIFE STORAGE PARAMETERS													
DIA inch	Composite wall thickness (mm)												
	3	4	5	6	7	8	9	10	11	12	13	14	15
6	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
8	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
12	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
16	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
20	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
24	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
28	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
32	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
36	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
40	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
44	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
48	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue
52	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue	Blue
56	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Blue	Blue	Blue	Blue
60	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
64	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue

- 44 to 77° F – 12 months
- 44 to 57° F – 3 months

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DESIGN CHARACTERISTICS	
Host pipe profile	All types
Diameter range	8" – 60"
Structural wall thickness	3 mm-12 mm, in 1 mm increments
Permissible elongation	≤16": DN + 2% >16": DN + 4%
Outer foils	Integrated gliding and light protection foil and permanent foil with barrier
Liner construction as outlined in	DIBt approval Z-42.3-350, Annex 1 and 2, abZ/AB

COMPOSITE REINFORCEMENT	
Glass fiber type according to DIN 61850	Permanently corrosion and chemical resistant, ECR
Number of layers multiaxial fabric	≥ 2
Glass area weight per mm wall thickness	1,100 g/m ² ± 150 g/m 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	≥ 46% (mass-based)
Barcol hardness according to DIN EN 59	≥ 40 IRHD
Longitudinal seam	Yes

FOILS	
Inner foils with barrier function	FastPlus
- Foil Type	Semi-permanent*
- Materials	PE/PA nonwoven PET
- Thickness	Up to 400 µm
Protective outer gliding foil, UV light protection** integrated	
- Material	PVC reinforced fabric
- Thickness	Up to 500 µm
Permanent outer foil with barrier function	
- Materials	PE/PA/PE and nonwoven PP
- Thickness	Up to 200 µm

* (terms ISO 11296- 4) Semi-permanent: Facilitates liner installation and curing without post-installation functions. Remains in the liner.

** Up to 24" and max. 5.500lbs liner weight and corresponding condition of host pipe, liner may be installed without additional gliding foil.

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MECHANICAL CHARACTERISTICS		
Short-term circumferential E modulus according to DIN EN 1228 // DIN EN ISO 11296-4:2011	8" to 64"	2,970,000 psi
Short-term bending E modulus according to DIN EN ISO 11296-4:2011 // DIN EN ISO 178 // ASTM D790	8" to 15" ≥18"	2,450,000 psi 2,800,000 psi
Short-term bending stress according to DIN EN ISO 11296-4:2011 // DIN EN ISO 178 // ASTM D790	8" to 64"	39,000 psi
Retention factor A after 10,000 hours according to DIN EN 761	8" to 15" ≥18"	1.31/76% 1.25/80%
Retention factor A after 20,000 hours according to DIN EN 761	8" to 15" ≥18"	1.34/75% 1.28/78%
Creep tendency after 24 hours according to DIN EN ISO 899-2	8" to 64"	≤ 6%