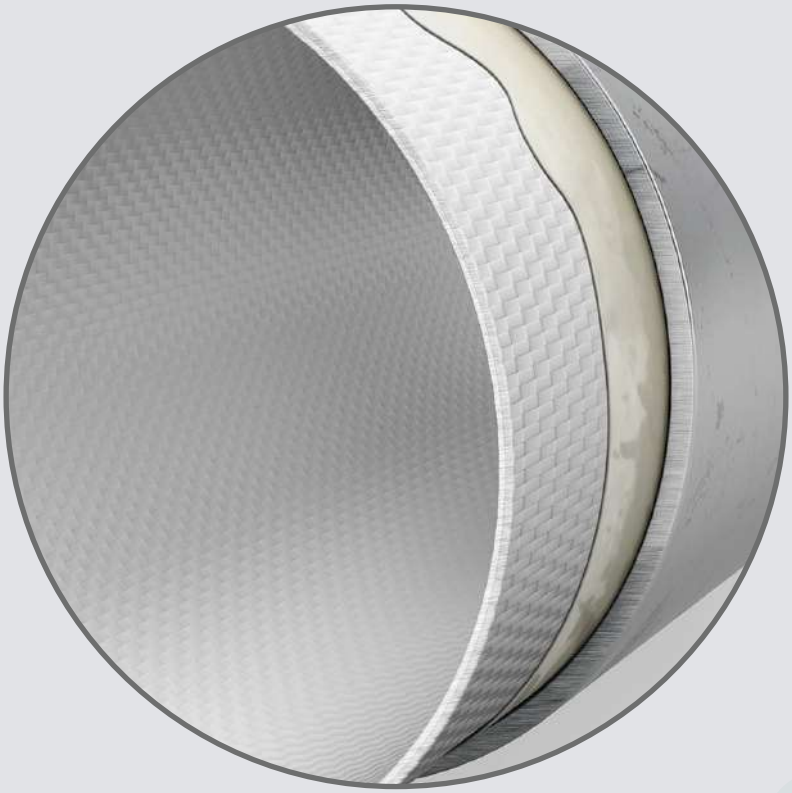
AMEX SANIVAR

Specifications
SaniLine®



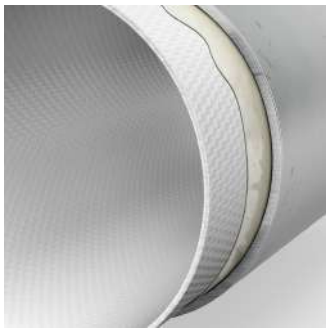
Amex Sanivar AG
Neustraße 19
4623 Neuendorf / Switzerland
T +49 171 610 11 31
M sales@amex-sanivar.com

AMEX SANIVAR

Specifications

SaniLine®

Application for SaniLine®



SaniLine® consists of a resistant polyester-yarn textile liner with a polyurethane or polyethylene coating. SaniLine® is inverted into the host pipe, sealing there with a polyurethane adhesive. It can be used in various pipe materials: steel, cast iron, ductile iron, steel reinforced concrete, in-situ concrete, asbestos cement, PVC, AZ, GRP, clay, PP, and PE. It is also applicable in various shapes of pipes: circular, elliptical, angular, mouth, and squared. SaniLine® can also be used with potable water, industrial water, sewage, gas, oil, and other petrochemicals.

Product name	SaniLine®
Liner material	PET-multifilament yarn
Coating material	Polyethylene / polyurethane
Diameter	DN80 - 1200
Installation length (max)	350m
Installation time (max)	6 hours
Installation method	Inversion
Curing method	Ambient/pressure
Curing time (max)	24 hours
Inversion pressure	0.5-1.5 bar
Max. applicable operating pressure	16 bar
Bends	Up to 90°
Ending	End seal

Tests and approvals

Potable water	DVGW, KTW, ACS, Hygene Institute Moscow
Gas	DVGW, SVGW
Quality management	ISO 9001
Environmental management	ISO 14001
Burst test	DIN 14811
Abrasion resistant	DIN EN 14811:2008-01

Technical data of textile liner

Melting point {ISO 3146}	250 - 260°C
Density	1,38 g/cm3
Outside ignition temperature {ISO 871}	> 400°C
Self-ignition temperature {ISO 871}	> 500°C
Decomposition temperature	> 280°C
Tensile strength, longitudinal {ISO 527}	1000 - 2000 N/cm
Tensile strength, radial {ISO 527}	800 - 2000 N/cm
Elongation at break, longitudinal {ISO 1421}	20 - 30 %
Elongation at break, radial {ISO 1421}	40 - 60 %

Hydronamic properties liner

	OUTER DIAMETER [MM] *[1]					
	S*(2)	0 BAR	0.1 BAR	0.3 BAR	0.5 BAR	MASS [G/M]
80 MM	1.5-1.7	78.3	78.6	80.5	82.1	CA. 332 G/M
100 MM	1.5-1.7	97,0	98.0	101.5	104.7	CA. 377 G/M
200 MM	2,2-2.4	194.2	198.0	280.9	216.5	CA. 1022 G/M
300 MM	2,2-2.4	293.9	300.6	314.6	321.9	CA 1597 G/M
400 MM	2.6-3.0	386.6	395.2	413.3	421.9	CA. 2210 G/M
500 MM	2.6-3.0	491.4	506.6	529.0	540.0	CA. 2904 G/M
600 MM	2.8-3.2	570.3	576.1	599.6	611.1	CA. 4230 G/M
700 MM	2.8-3.2	669.41	679.01	713.1	835.4	CA. 5350 G/M
800+ MM	3.0-3.4	763.65	774.62	815.17	835.64	CA 6200 G/M

(1) Tolerance +/- 1/2mm for up to DN 200 and +/-2/3mm for DN 300 and 400
(2) Wallthicknes of liner +/-0,3/0,4mm

Chemical resistancies water

Drinking water	resistant
Supply water	resistant
Process water	resistant
Treated water	resistant
Sea water	resisant
Industrial water	examination technical department
Saturated brine	resistant
Chlorine water (2.5ppm)	resistant
Sewage	resistant

Chemical resistancies oil

Diesel	resistant
Kerosine	resistant
Heavy oil	resistant
Avgas	resistant
Hydraulic oil	resisant
Crude oil	examination technical department
Heating oil	examination technical department
Modgas	not resistant
Biodiesel	not resistant
Gasoil	examination technical department
Pygas	examination technical department
Chlorine Water (1.5ppm chlorine)	resistant

Chemical resistancies gas

Natural gas	resistant
Coke oven gas	resistant
Methane	resistant
Propane	resistant
Butane	resisant
Hydrogen	resisant
Nitrogen	examination technical department
Carbon dioxide	resisant
Carbon monoxide	resisant
Oxygen	resisant
Hydrogen sulphide	not resisant
Biogas	not resistant

Technical data of adhesive

Substance	Two-Component polyurethane
Mediums	Potable water, gas, oil, sewage
Component mixture	polyol. formulate + polisocyanate
Density components A&B	1.27 / 1.22 & 1.27/1.13 g/cm³
Viscosity comp. A 7/20 & 7/100 (20°C)	50.000 / 20.000 & 3000 mPa
Viscosity comp. B 2/20 (20°C)	200 +/- 50 & 1800 mPa
Glass transition temperature	-5°C
Shore hardness A	77 +/- 5 & 65
Modulus of elasticity (20°C) EN1228	10 mPa
Tensil strength (20°C) ISO 11003-3	3 mPa
Elongation at break (20°C)	44%

Application of adhesive

Preparation	Surface must be properly cleaned
Application temperature	at least 10°C
Pot life at 20°C & 40°C for 100 g	>180 / >130 minutes
Fixation time at 20°C & <10°C	>6 / >12 hours
Stripping strength ASTM D 903	178,6 g/mm
Application quantity	Depends on type and diameter of piping
Pot life	> 180 minutes for 100 g at 20 °C
Pot life	130 minutes for 100 g at 40 °C
Gel time	50-55 minutes at 60 °C
Fixation time	> 6 hours at 20 °C
Fixation Time	At least 12 hours at temp. below 10°C

Connecting technologies

Amex Liner End® seal and end ring

For connecting SaniLine®, we recommend the the Amex LEM® seal. From DN 200+ the Amex Liner End® is used. Diameters smaller than DN 200 use a standard steel end ring. Amex Liner End® uses a proven interlocking technology that guarantees absolute fluid density, independent of the pipe or media. In addition to the end seal, steel bands are used to hold the seal in place.

House connection rivet tool

In the case of reconnecting house connections with SaniLine®, our standard rivet tool can be used. The host pipe has to be drilled from the outside. The rivet can be installed under pressure for a water line and is tested to PN16.