

TECHNICAL DATA

Aquapipe is designed and installed according to ASTM F 1216 and ASTM F 1743 standards, respectively. It is designated as a class IV fully structural lining according to the AWWA M28 structural classification. This means that Aquapipe is a standalone structural pipe that can withstand all dead and live loads and internal pressures including a vacuum without the help of the residual strength of the existing pipe. If the host pipe is depressurized, Aquapipe will resist the external dead and live loads.

The proprietary epoxy resin used has no effect on water quality and contains no VOCs. There is no styrene in the epoxy resin.

Physical Properties

ASTM Requirements

Description	Test Method	ASTM F 1216
Flexural Strength	ASTM D790	31 MPa
Flexural Modulus	ASTM D790	1 723 MPa
Tensile Strength	ASTM D638	24 MPa

Aquapipe Properties

Operating pressures up to 20 bar

Maximum burst pressure: >50 bar

Resists full vacuum of -1 bar

Elongation 20% at maximum deformation

Poisson's Ratio 0.3

Allowable Long Term Vertical Pipe Deflection 15%

Allowable Long Term Bending Strain 3.9%

Physical Properties & Design Parameters (Project Specific)

The following design parameters have been used in the design of the pipe liner in addition to the manufacturer's standards and ASTM F1216.

1.	Ovality of existing pipe	2% minimum
2.	Existing pipe condition	Fully deteriorated
3.	Liner Thickness	Determined by Design to ASTM F1216
4.	Factor of safety against buckling	Up to 2
5.	Live load	HN HO 72
6.	Modulus of soil reaction	4826 kPa minimum
7.	Soil unit weight	1920 kg/m ³ minimum (If no Boring Data is available in vicinity)
8.	Creep reduction factor	50% maximum
9.	Internal pressure	System working pressure
10.	Depth of cover	As indicated in bid documents