

ADVANTAGES OF ALPHALINER[®] VS FELT CIPP

		FELT CIPP CURED USING STEAM OR WATER	ALPHALINER [®]
INSTALLATION PROPERTIES	Controllable Installation (able to start and stop)	No stopping once exothermal begins	Yes
	Shrinkage	Moderate (depending on resin quality)	Minimal (lowest resin shrinkage of all installation methods)
	Curing Documentation	Temperature recorded at accessible sections only	Infrared sensors record entire process
	Resin Migration / Loss / Washout	Yes	No
	Host Pipe Required for Liner Integrity	Yes	No
ENVIRONMENTAL	Energy Usage	Medium	Low
	Airborne Odor	Moderate to Heavy	Minimal
	Installation Noise	Medium To High	Low
	Post Curing Discharge	Styrene filled water or condensate	None
	Environmental Footprint	Large	Minimal (less equipment required)
STRUCTURAL	Initial Flexural Modulus*	250,000 - 450,000 psi	1,660,000 psi Alphaliner [®] 500 3,000,000 psi Alphaliner [®] 1800H
	Adjusted Long Term Flexural Modulus* (50 Year Life Results)	125,000 - 225,000 psi	1,210,000 psi Alphaliner [®] 500 2,550,000 psi Alphaliner [®] 1800H
	Initial Flexural Strength*	4,500 - 5,000 psi	50,000 psi Alphaliner [®] 500 68,000 psi Alphaliner [®] 1800H
	Liner Reinforcement	None	ECR Fiberglass
	Porosity of Cured Liner Pipe Wall	Not Tight	Tight
LINER & GENERAL INFORMATION	Pre-Liner	Not Routinely used	Yes - fully encapsulated
	Manufacturing	By contractor at facility or in the field	ISO Certified 9001 :2015 facility
	Outer Film	Inversion installations, not typically provided	Yes
	Tube Material	Felt/ Polyester	Fiberglass
	8" Pipe Typical Liner Thickness	6 mm	3.5 mm
	Diameter Ranges	4" to 124"	6" to 72"
	ASTM Installation Standard	F1216, F1743	F2019
	Installer Qualifications	Varies with installer	Installer certification required
	Installation	Inverted or Pull in	Pull In
	Liner Inflation	Water or Air	Air
	Effect of Cold Spots in Soil	Additional cure time required	None
Liner Inspection BEFORE Curing	None	CCTV inspected	

*Initial E modulus tests using curved specimens requires a pass value that is 85% or higher to compensate for the variance caused by lab testing devices (ASTM F2019-20). Reline America uses an additional 5% safety factor by lowering third-party test reports 5% prior to applying design criteria.