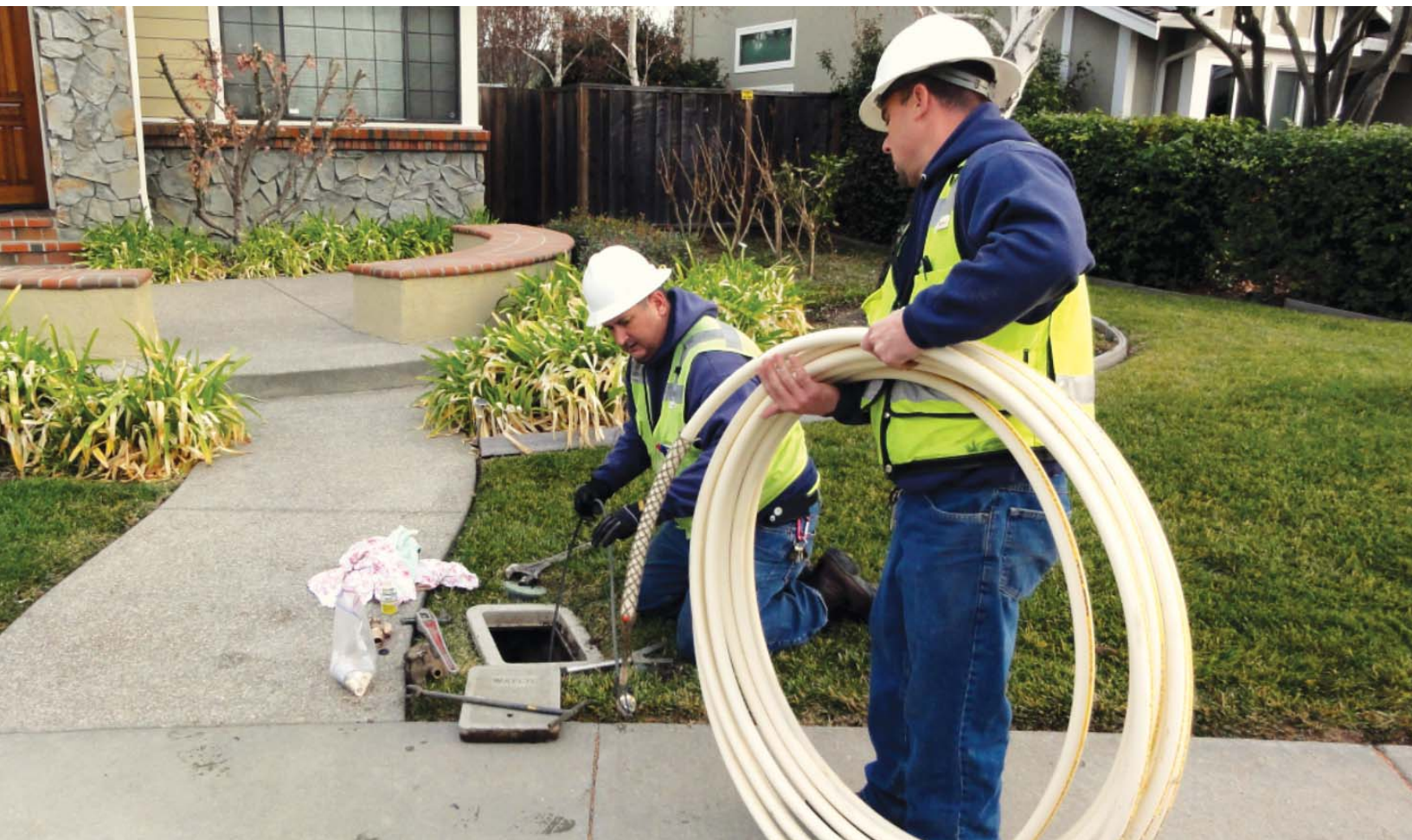


# SERVICEGUARD® COMPOSITE PIPE

*CPVC-AL-CPVC piping for water service lines*



 **Underground Solutions®**  
an AEGION® company

# SERVICEGUARD® COMPOSITE PIPE



## Installations

- Trenchless pipe splitting
- Trenchless pipe extraction
- Horizontal boring
- Open-cut

## Experience

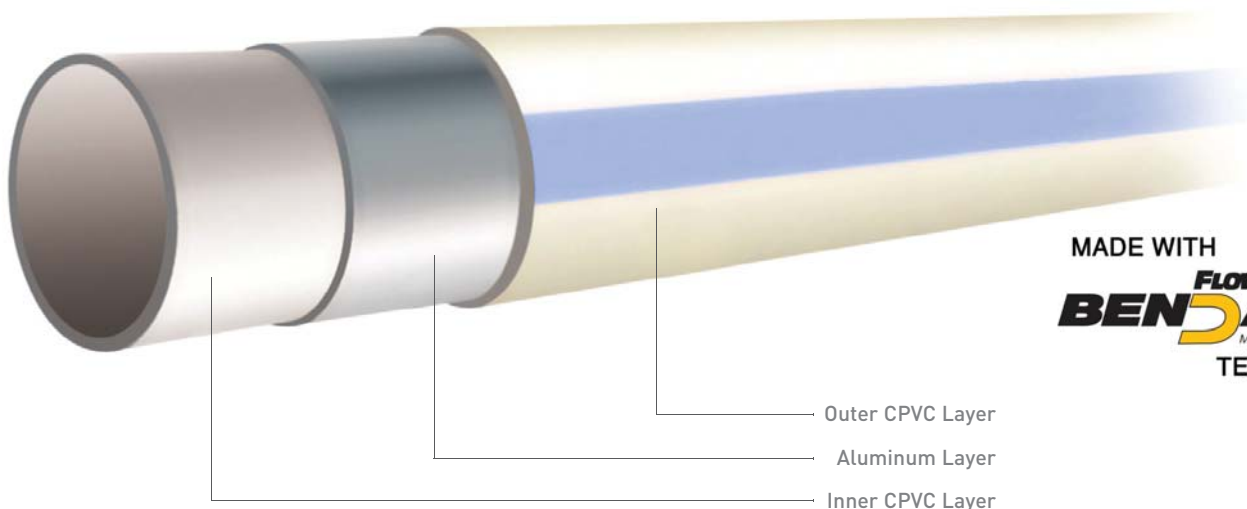
- Over 100,000 feet installed
- In-service installations since 2006

## Standards

- NSF 61 approved
- Made in accordance with ASTM F2855
- Approved for use with standard AWWA C800 compression fittings

## Features and Benefits

- Corrosion-resistant
- Resistant to oxidative degradation by chlorine-based disinfectants
- Suitable for installation using trenchless methods
  - Resistant to rock impingement
  - Superior crush strength compared to HDPE
  - Tensile strength ideal for trenchless methods of water line replacement or repair
- Installed easily without use of expensive tools or torches
- Excellent combination of flexibility and rigidity allows the pipe to be workable yet hold shape
- Excellent long-term UV resistance
- Contractors report that ServiceGuard® Composite Pipe is more resistant to kinking or flattening than copper tube



- Outer CPVC Layer
- Aluminum Layer
- Inner CPVC Layer

MADE WITH  
**FLOWGUARD®**  
**BENDABLE**  
MULTILAYER PIPE  
TECHNOLOGY

## Engineering & Installation Data

Dimensions & Weights						
Nominal Tube Size (NTS)	Average Outside Diameter (mm)	Average Inside Diameter, (mm)	Wall Thickness, in (mm)			Weight, lbs/ft
			Aluminum (Average)	Inner CPVC (Minimum)	Outer CPVC (Minimum)	
3/4"	0.875 (22.23)	0.691 (17.55)	0.017 (0.43)	0.028 (0.71)	0.028 (0.71)	0.167
1"	1.125 (28.58)	0.932 (23.67)	0.017 (0.43)	0.034 (0.86)	0.034 (0.86)	0.227
1-1/2"	1.625 (41.28)	1.376 (34.95)	0.017 (0.43)	0.059 (1.50)	0.037 (0.94)	0.423

### Pipe Assembly



**Step 1:** Cut the ServiceGuard® Composite Pipe using a standard pipe wheel cutter; make sure the cut is square.



**Step 2:** Use a pipe reamer and other suitable tools to deburr the inside and outside of the pipe at the cut end.



**Step 3:** Apply FlowGuard® Gold one-step solvent cement to pipe and insert fitting. Install insert fitting in cut end of pipe.



**Step 4:** Approved compression fittings are then installed per the fitting manufacturer's recommendations.

### Trenchless Splitting Installation



**Step 1:** Existing service line is exposed at connection to main. Pipe splitter is connected to new ServiceGuard® Composite Pipe.



**Step 2:** Pipe splitter and ServiceGuard® Composite Pipe assembly are inserted into the existing service line through the meter location.



**Step 3:** After the existing pipe is split and the new ServiceGuard® Composite Pipe is installed, the meter is reconnected.



**Step 4:** Final connection is made at the water main and the new ServiceGuard® Composite Pipe is flushed and placed into service.

### Helpful Installation Tips

- ServiceGuard® Composite Pipe may be bent by hand, however, the tightest bend radius can be achieved (six times the OD of the pipe) using a bending tool.
- ServiceGuard® Composite Pipe bends similar to copper service line and will maintain a 90° bend when initially bent to 135°.
- Slight ovality is to be expected from the coiling process and working with the pipe in the field. This may be corrected with an appropriate re-rounding tool.
- If the pipe has become kinked or damaged, remove and replace that portion of the pipe prior to finalizing the installation.

### Performance

Property	Value	ASTM
Impact Strength (ft. lbs. / in., notched)	10	D256A
Internal Pressure (psi @ 73°F)	400	F2855
Apparent Tensile Strength of Tubing (lbs)	2,500	F1281
Hazen-Williams C Factor	150	—
Bend Radius	6 x OD	—

# SERVICEGUARD® COMPOSITE PIPE



Napa, CA



Murfreesboro, TN



Beech Mountain, NC



EBMUD, San Ramon, CA

Underground Solutions, Inc. provides infrastructure technologies for power, water and wastewater applications. FlowGuard® is a trademark of The Lubrizol Corporation. ServiceGuard® and Underground Solutions® are trademarks of Aegion Corporation and its affiliates.

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