

FUSIBLE PVC® PIPE: A PROVEN SOLUTION IN INDIAN COUNTRY

Overview

A number of tribes and tribal organizations are involved in the ownership and operations of water distribution and wastewater collection systems. Tribal utility owners and operators must consider many factors when choosing construction methods and materials. These include environmental impact during construction, operation and maintenance costs, ability to maintain water quality and product lifecycle.

Fusible PVC® pipe is a fully restrained, joint free piping system made to ensure safe drinking water quality throughout its design life. For water distribution systems, Fusible PVC® pipe eliminates unnecessary water loss and the energy cost associated with treating and transporting lost water. Fusible PVC® pipe systems eliminate exfiltration of sewage, infiltration of groundwater and root intrusion for wastewater collection networks, improving ownership and operating costs

Fusible PVC® pipe has a proven track record on projects in Indian Country and continues to perform as a resilient, environmentally friendly product. Fusible PVC® pipe is a cost-effective solution that provides tribes and tribal organizations a long service life by working in a wide range of installation methods including both trenchless and traditional open-cut excavation.

PVC pipe, already prevalent in most infrastructure networks, now accounts for more than 70 percent of the new water pipelines installed in the United States. The simultaneous trends of trenchless installation method adoption and the standardization of PVC pipe has made Fusible PVC® pipe systems an optimal choice for many tribes and tribal organizations. Fusible PVC® pipe meets applicable PVC piping standards including but not limited to AWWA C900/C905, AWWA C605, ASTM F1674, NSF 61, NSF 61-G and ASTM cell class 12454.



Fusible PVC® pipe in The Navajo Nation

Select Fusible PVC® Pipe Milestones:

- Over 10,000 total installs with over 10 million feet in service
- Installations in all 50 U.S. states, U.S. territories, Canada, Mexico and New Zealand
- Continuous HDD pull-ins of greater than 7,000 feet
- Over 40 HDD installations exceeding 3,000 feet
- Six-time Trenchless Technology Project of the Year or Honorable Mention winner

Select Indian Country Fusible PVC® Pipe Users:

- Navajo Nation
- Fort Peck Assiniboine and Sioux
- Salish Kootenai
- AK-Chin Indian Community
- Spirit Lake Nation Sioux Nation—
Standing Rock Rural Water
- Lummi Nation
- Chippewa Cree Tribe
- Red Lake Nation
- White Earth Nation
- Turtle Mountain Band of
Chippewa Indians
- Oneida Nation
- Indian Health Services

Fusible PVC® Advantages

Environmental compatibility: Fusible PVC® pipe may be installed using trenchless methods that reduce disruption to the environment and communities in general. Fusible PVC® pipe is a corrosion proof material that maintains water quality standards throughout its design life.

Quality control: The fused joint eliminates potential installation issues often associated with conventional bell-and spigot joints such as rolled or displaced gaskets, over-insertion, over-deflection and post installation issues associated with differential soil settlement over time. All Fusible PVC® pipe joints are assembled by qualified, trained fusion technicians. Data on each fusion joint are captured and reviewed for quality assurance.

Low installed cost: When utilizing Fusible PVC® pipe, installers can reduce the resources typically required for other “equivalent” piping materials. For instance, reducing the amount of open trench required due to the low-profile joint for Fusible PVC® pipe drives cost savings in excavation, hauling, select fill and above ground restoration.

No joint leakage: Fusible PVC® pipe provides a zero leakage pipe system, eliminating water loss, infiltration and exfiltration at the pipe joint.

Seismic suitability: Fusible PVC® pipe is a fully restrained pipe system that provides improved performance versus conventional bell-and-spigot pipe related to axial deflection and differential ground settlement. Fusible PVC® pipe has been used in potable water distribution, transmission, reclaim water, sanitary sewer force main and gravity sewer pipelines in areas of high seismic activity with excellent historical operating performance

Maintenance: Fusible PVC® pipe completely eliminates potential for root intrusion at segmented pipe joints. Fusible PVC® pipe also does not corrode—eliminating any concern of tuberculation which can impact flow capacity and water quality.

Reduce operating costs: Eliminating infiltration, exfiltration and internal corrosion reduces volume, energy and operating costs at treatment and pumping facilities.



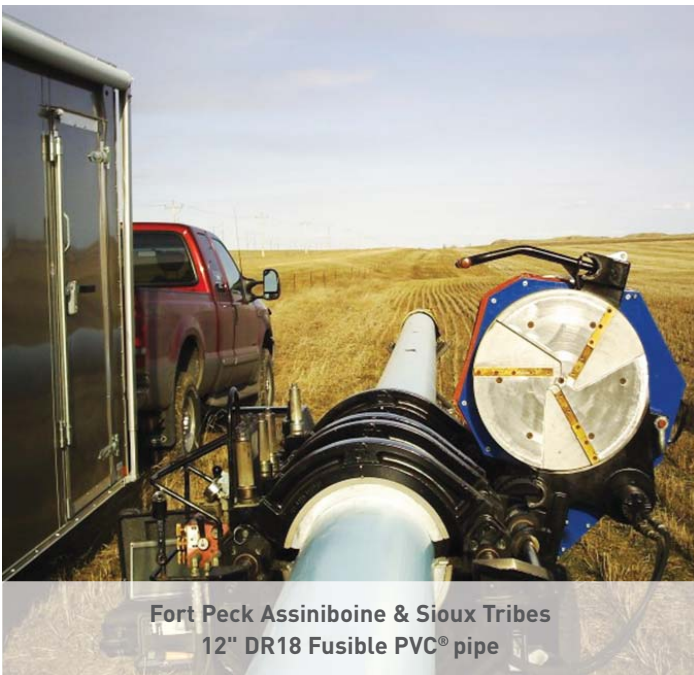
Spirit Lake Nation
12" DR18 Fusible PVC® pipe



Navajo Nation
14" DR18 Fusible PVC® water main ready for installation



Spirit Lake Nation
8" DR14 Fusible PVC® water main



Fort Peck Assiniboine & Sioux Tribes
12" DR18 Fusible PVC® pipe



Fort Berthold Rural Water – Three Affiliated Tribes
12" DR18 Fusible PVC® pipe

Underground Solutions, Inc. provides infrastructure technologies for water, wastewater and power cable conduit applications. Underground Solutions' Fusible PVC® pipe products, including Fusible C-900®, Fusible C-905® and FPVC®, utilize patented technology to produce a fused monolithic, fully-restrained, gasket-free, leak-free piping system ideal for trenchless (horizontal directional drilling, pipe bursting and sliplining) or conventional "open-cut" installations and are available in 4-inch to 36-inch diameters. The combination of standard fittings and lower weight with higher flow for a given pressure class versus other thermoplastic pipes ensures that Fusible PVC® pipe brings greater economy to most pipeline projects.



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