

CASE STUDY

HOMEBUILDERS UPGRADE FROM COPPER TO COST-EFFECTIVE CPVC PLUMBING SYSTEMS

NVHomes

Fairfax, VA

Established: 1980

When one of the top homebuilders in the U.S. began laying plans for a town home community in the Washington, D.C. area in the early 1990s, they decided to evaluate alternative plumbing systems to traditional copper based upon price and economy. Following an investigation and use of FlowGuard Gold® CPVC, a rigid plastic plumbing system, for the town home community, they discovered that CPVC offered benefits superior to copper that would also apply to their single-family luxury home product line.

As part of the homebuilding division of NVR, Inc., NVHomes, Fairfax, VA, has developed a reputation for constructing quality homes of lasting value with excellent designs and a number of architectural details and amenities for upscale homes averaging \$380,000.

The advantages of a rigid plastic plumbing system, including reliability, cost-effectiveness, easier installation, and homeowner satisfaction, convinced NVHomes to specify CPVC in all their properties in the Washington, D.C. and Baltimore metropolitan areas. In less than a decade, NVHomes made the transition from 100% copper to 100% CPVC plumbing systems in their homes. And, other builders in the Washington, D.C. area have followed suit.



Investigating Alternative Plumbing Systems

For the Washington, D.C. town home project, NVHomes researched possible alternative plumbing systems that would be more cost efficient than copper and quicker, easier, and safer to install. CPVC plumbing systems had more than 40 years of proven experience, but had not been used by NVHomes before.

The pricing of the town home residences was about \$170,000, which put NVHomes in competition with many other regional builders going after the middle-income market of young professional, first-time home buyers. NVHomes wanted to find a more cost-effective plumbing system than copper without sacrificing quality.

Tom Ptak, Director of Production for NVHomes, knew about the benefits of CPVC plumbing systems because he had used them in his own home in Atlanta, GA, in the mid-1980s and then again in his Vienna, VA home, which was built in 1993.

Given his personal experiences with CPVC plumbing systems, Ptak said, "I didn't experience any problems or quality issues in either home. And, with the town home project, it seemed to be the right opportunity to offer CPVC plumbing systems to our buyers as well."

Ptak consulted Lubrizol about FlowGuard Gold® CPVC plumbing systems in 1992. The innovator of CPVC plumbing systems, Lubrizol plumbing products include pipe, fittings and valves that carry the FlowGuard Gold® trade name.

Lubrizol reinforced to Ptak that CPVC plumbing systems could give NVHomes the solution they desired – reliability, cost-effectiveness, ease of installation and homeowner satisfaction. And, CPVC plumbing systems would be less expensive than copper.

CPVC Versus Copper

The benefits of CPVC versus copper plumbing systems are not just a matter of lower costs; CPVC plumbing systems are faster and easier to install for the experienced, professional plumber, reducing overall labor costs. CPVC plumbing systems do not require torches or heavy equipment. A one-step joining system can provide curing in 10 minutes on standard size pipe for ease in pressure testing.

Ptak sent his contractors to a two-day training course sponsored by Lubrizol to teach them how to install the CPVC plumbing system correctly. The NVHomes contractors saw that the system was extremely easy to work with, safer and quicker to install.

"For the town home communities, using CPVC plumbing systems was a no-brainer," said Ptak. "Our guys discovered how easy the system was to install, and the lower cost of CPVC helped us provide the added amenities NVHomes is known for."

Now that NVHomes was convinced by the effectiveness of CPVC plumbing systems in the town homes installation, they realized that CPVC systems would also be well-suited for homes using well water and septic systems.

Cost-Effective Corrosion Relief

CPVC plumbing systems offer the superior solution for single-family homes that deal with aggressive water and soil conditions, such as homes that use well water, because they do not corrode, pit or scale, so water purity is maintained.



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Type of Construction:
Residential –
Single Family

Installation Type:
New

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PIPE & FITTINGS
NOT A DROP OF DOUBT.

FLOWGUARD GOLD®

In environments with aggressive water, pH levels of less than 6.5, copper plumbing does not pass ANSI/NSF Standard 61. Plus, copper cannot resist certain soil chemistries or compositions and will begin to degrade. In these conditions, copper pipes can begin to leach into the water, causing it to not meet the potable water quality standard. The maintenance costs and time involved in replacing the system are considerable for both the builder and homeowner.

FlowGuard Gold® plumbing systems exceed ANSI/NSF Standard 61 for water quality with no pH level restrictions. Unlike copper tubing, CPVC systems maintain their properties in high acidic water environments. With homeowners demanding reliable and safe plumbing systems, CPVC pipes maintain the pristine level of water quality coming into the home.

CPVC plumbing systems also meet all model code approvals, including BOCA National Plumbing Code, Standard Plumbing Code, Uniform Plumbing Code, CABO 1- and 2- Family Dwelling Code, Canadian Plumbing Code and International Plumbing Code.

Contractors Buy Into CPVC Systems

"Out of the 60 communities we were building, we had about 10 well areas that we decided to test CPVC plumbing systems in," said Ptak. "We asked Lubrizol to help us prove that contractors were making the right decision with facts and effective product literature."

In 1996, in part driven by the issues and discussions between Lubrizol and Tom Ptak, Lubrizol developed a consumer and contractor education program to help them understand the advantages of CPVC plumbing systems.

"We had convinced plumbing contractors that CPVC was our material of choice," said Ptak. "And, the home buyers' perceptions of CPVC plumbing systems were changing as well."

CPVC Translates to High-End Housing Projects

Given its tremendous success in the town home project and in single-family homes with corrosive environments, NVHomes decided to specify CPVC plumbing systems for its entire product line. Not only would CPVC provide homeowner savings, but also better insulation and energy savings.

Unlike copper piping materials, homeowners have found that the thermoplastic properties of CPVC plumbing systems provide insulation to reduce condensation and keep hot water hotter and cold water colder than copper, resulting in less energy loss through the wall of the pipe. This can save homeowners money on heating and cooling bills and virtually eliminate "sweaty pipes." The thermoplastic properties of CPVC systems also provide a quieter system with less resonance than metal plumbing systems, reducing the sound of water running and the potential of the pounding noise of water hammer.

Today, NVHomes installs FlowGuard Gold® CPVC plumbing systems in all of their homes working with several plumbing contractors in the Washington, D.C. and Baltimore area, including Atlas, Masters, Borden, Van Sant Heating & Plumbing, and Shepherd Plumbing in Baltimore, MD.

"We definitely have peace of mind with FlowGuard Gold® CPVC Plumbing Systems," said Ptak. "They are not just cost effective and better than copper plumbing systems, but now CPVC has a 40-year plus track record of success."

Since Lubrizol's development of CPVC plumbing systems over 45 years ago, more than three (3) billion feet of CPVC pipe has been installed in homes, condominiums, buildings, apartments and hotels, including twelve (12) million homes. For more information on the FlowGuard Gold® plumbing system, including pipes, valves, joining cement, caulks, sealants and tools, call 1-888-234-2436, X7393, or visit www.flowguardgold.com.

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