

# PVC PIPE ASSOCIATION ISSUE BRIEF

## PVC PIPE: HIGH QUALITY AND PERFORMANCE STANDARDS

The quality and performance of PVC pipe are assured by a wide array of tough standards, control tests and independent certifications.

### INDEPENDENT CERTIFICATION

Numerous standards agencies govern PVC pipe manufacturing. The most widely recognized of these for water and sewer applications are the American Waterworks Association (AWWA), the American Society of Testing and Materials (ASTM) and the Canadian Standards Association (CSA). For potable water quality, the best known certification is provided by NSF International/American National Standards Institute (NSF/ANSI). A comprehensive list can be found in the *Handbook of PVC Pipe*.

In cooperation with users, designers and manufacturers, including the Uni-Bell PVC Pipe Association, these agencies offer an independent assurance of sound engineering, appropriate testing and good quality – as well as information on installation.

### EXTENSIVE QUALITY CONTROL

PVC pipe undergoes numerous quality control tests, including regular measurements of critical dimensions, tests for extrusion quality, pipe flattening, burst pressure, impact resistance, joint integrity, and hydrostatic soundness. This ensures optimum quality, reliability and long-term strength.

For instance, AWWA C900 pipe receives a minimum of 28 quality control checks daily on each extrusion line, in addition to the hydrostatic proof test performed on each pipe, which is tested at twice its pressure rating – confirming the product exceeds performance requirements. See Chapter IV of the *Handbook of PVC Pipe* for more details on manufacturing and testing.

Each PVC pipe is stamped with extensive information, including production or lot code, allowing it to be matched with applicable quality records, which are maintained for a minimum of two years.

### THIRD-PARTY INSPECTION

Independent inspection provides added assurance that PVC pipe meets applicable standards and specifications. This is done through unannounced plant audits, verification of materials, procedures and test equipment, as well as through random sampling and testing of pipe and materials.

Tests are performed by non-profit agencies such as NSF International, Underwriters Laboratories and the International Association of Plumbing and Mechanical Officials, which can prevent shipment and initiate recall of nonconforming products.

Further scrutiny of PVC pipe performance is provided through testing and research by universities, laboratories and other water and sewer associations. Many of their reports are available in Uni-Bell's technical library.

### TWO MILLION MILES OF UNSURPASSED RELIABILITY

PVC pipe's superior qualities and performance have made it the material of choice for water and wastewater systems since it was introduced in North America some 70 years ago. Today, more than two million miles of PVC pipe are in service throughout the continent.