

HDPE Pipe for Municipal Water Service Lines

Pipeline Plastics Water pipe is a high performance PE4710 polyethylene piping product designed for a range of applications. A PE4710 is the latest and highest performing PE compound recognized by various standards such as AWWA C901, C906, ASTM D3035, F714 and other common standards.

PE WATER PIPING STANDARDS

AWWA and ASTM are common standards for PE pipe specified for various water and wastewater applications. For small diameter water pipe – ¾” to 3” - common standards are:

AWWA C901, “Polyethylene (PE) Pressure Pipe and Tubing ¾” Through 3” for Water Service”

ASTM D3035, “Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter”.

PE pipe has been used successfully in potable water service for many decades. Recently AWWA C901-21 was revised and published to provide for even greater enhanced reliability in a vast array of water service environments. Water service piping is one of the more rigorous applications due to the variety of installation practices and operating environments. To provide system owners with the most robust PE piping products C901-21 now requires all PE compounds used to produce municipal water service pipe be a PE4710 and meet the highest level of chlorine resistance with a “CC3” rating.

In addition, due to the rigors of installation and use in municipal water service, AWWA C901 now only allows for a DR9/PC250 pipe for all sizes ¾” to 3”. While this level quality and performance is not needed for most operating environments, and is many times over designed for the application, using a DR 9 will provide additional assurance of a 100+ yr design life and oxidation resistance in even the most aggressive operating conditions according to AWWA M55, which is supported by various industry research reports including the Plastics Pipe Institute TR-49. “*Recommendations for AWWA C901 Service Tubes in Potable Water Applications-2020*”.

PIPELINE PLASTICS WATER PIPE PRODUCTS

Going forward Pipeline Plastics will produce a Municipal Water Service (MWS) pipe that meets all the requirements of AWWA C901-21 for potable water service applications. PLP MWS pipe will utilize a high performance PE4710-CC3 compound and will be available only in DR 9 in compliance with the current AWWA C901-21 requirements. This will provide the system owner an extremely robust piping product with a very long and reliable service life.

PLP Water/Industrial (WI) and Water/Industrial/FM (WIFM) products will continue to utilize very high performing PE4710-CC3 compounds as well. These Water/Industrial (WI) products in sizes 3” and smaller will be produced in accordance with ASTM D3035 only, but no longer to AWWA C901. Water/Industrial/FM pipe will also be certified for conformance to FM 1613 if needed for fire water protection piping systems. Both products will continue to be certified to meet the requirements of NSF International Standard 14 for potable water applications.

PLP TechNote 207



PAST PRODUCTION AND INSTALLATION

These changes will have no effect of PE pipe already purchased or installed. PE pipe produced and installed in accordance with previous versions of AWWA C901 - going back decades - will continue to provide excellent long-term service in potable water, wastewater, and reclaimed water applications. These latest revisions to C901 act to enhance the long-term performance in even the harshest installation and operating environments. Larger sizes of PE pipe - 4" to 65" - covered by AWWA C906 for water distribution, transmission and wastewater are not affected by these changes and will continue to be available as previously supplied.

Pipeline Plastics is committed to providing only the highest quality PE pipe for all applications with the best customer service and support. If you have additional questions concerning these changes, please contact your PLP Sales representative or engineering support.

Regards,

A handwritten signature in black ink that reads 'Stephen Boros'.

Stephen Boros
Vice President – Engineering
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