



# Clear PVC – the clear advantage

PLASTIC PIPE,  
VALVES AND  
FITTINGS

by Russ Consentino, CPMR

**H**ave you thought about PVC (polyvinyl chloride) pipe lately? Probably not, since it's such a mainstream product, garnishing about 62 percent of the global pipe market. Since its introduction into the U.S. market in the early 1950s, PVC pipe has proven to be a durable, dependable and cost-effective choice for applications such as potable water, wastewater, agricultural and industrial applications. It outperforms traditional metallic pipe materials, due to its inherent resistance to corrosion, and functions well in numerous environments.

While not exactly a recent development in PVC pipe, the clear versions are finding more acceptance in a myriad of applications. These applications benefit from the pipe clarity, especially when that property is added to the traditional benefits of PVC.

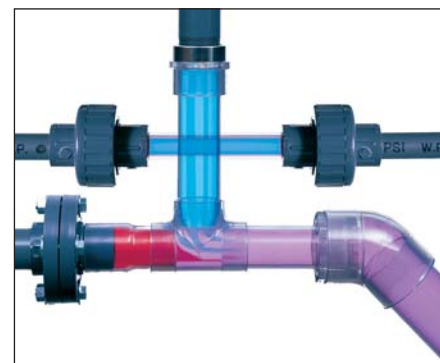
These benefits are well recognized: excellent corrosion resistance, smooth interior walls for improved flow characteristics, light weight, ease of fabrication and assembly, good pressure ratings and competitive costs.

However, there are opportunities where clarity adds an important dimension to the application. For instance, the ability to visibly monitor chemical processes, mix-

ing, filtration, potable and non-potable water lines provides an extra measure of safety for monitoring the process. It should be noted that potable water applications require that the material be listed with the National Sanitation Foundation (NSF International Standard 61). Certain clear PVC pipe materials also comply with FDA Title 21 requirements for food contact applications. (Check with your clear PVC pipe manufacturer for specific listing information.) This provides an advantage in certain food processing applications where visual monitoring is paramount.

It is also important that clear PVC pipe be produced in both Schedule 40 and Schedule 80 dimensions. This allows optimum performance/cost ratios and provides sufficient wall thickness for most pressure applications. When the clear process is done well, the clarity will not be compromised because of schedule differences. Several applications for clear PVC pipe include: chemical processing (i.e., mixing processes where visual monitoring of processes is critical), site glass, as well as visual leak detection (i.e., dual containment) to name a few.

This is a good time to caution that PVC pipe should be used in applications where the temperature will not exceed 140°F (66°C); clear PVC is no exception. In addition, as temperatures rise, the pressure rating of the system decreases. For example, at 110°F (43°C), the pressure rating is reduced by approximately 50 percent. The pressure rating of the clear PVC should be validated by the manufacturer, particularly when working at elevated temperatures. It should also be noted that the clarity of clear PVC pipe could be influenced by temperature and certain chemical service applications. Although similar to conventional PVC, the chemical resistance of clear PVC should be thoroughly investigated prior to use in chemical service applications, as it may not exhibit identical chemical resistance as conventional PVC piping materials.



Harvel Clear™ PVC piping can be used in a variety of chemical mixing/processing applications.

While clear PVC pipe is fully compatible with standard PVC pipe, fittings and valves, there are also clear fittings and clear PVC primers and solvent cements readily available. This improves visual monitoring of complete systems and adds considerable eye-appeal to finished projects.

For the distributor looking for new sales opportunities, clear PVC pipe can provide that tool to achieve those new sales. In fact, due to widely gained acceptance and use, clear PVC pipe continues to evolve and is now available in sizes from 1/4" up through 12" diameters. Applications abound and are found in such diverse areas as: chemical processing, medical/hospital, cosmetics, food & beverage processing, water & wastewater, high purity, fish hatcheries, aquariums, as well as displays and exhibits. ■

Russ Consentino, CPMR, is president of Plastic Solutions, Inc., a manufacturers' representative agency. He has been active in the plastics industry since 1963 and is a senior member of the Society of Plastic Engineers. He can be reached at Plastic Solutions, Inc., 424 Mahogany Walk, Newtown, PA 18940 USA; (215) 968-3242, fax (215) 968-5087, e-mail: plasticguy@msn.com.

For more information on clear PVC pipe, contact Harvel Plastics, Inc., P.O. Box 757, Easton, PA 18044-0757; (610) 252-7355, fax (610) 253-4436, e-mail: harvel@harvel.com, www.harvel.com.



High quality Clear™ PVC pipe and fittings in a full size range are offered in both Schedule 40 (1/4" to 12" diameter) and Schedule 80 (1/4" to 6" diameter) by Harvel Plastics, Inc.