

# CUSTOM TESTING AND R&D LAB SERVICES



## Offering services for the global plastics industry

Plastics play an essential role in the distribution of gas, drinking and wastewater worldwide. Testing and certification to internationally-recognized standards verifies products have met the required durability, performance and safety criteria for use in commercial and residential applications.

NSF International offers consulting and custom plastic testing and R&D services to help your company complete routine or unique projects required for your specific product type. We offer unmatched expertise and professional services. Our staff consists of professional engineers, Ph.D scientists and dedicated account managers. We provide independent quotes and test reports as well as direct invoicing.

Our 20,000 square-foot plastic testing lab in Ypsilanti, Michigan, USA is part of our global network of ISO/IEC 17025 accredited laboratories throughout North and South America, Europe and Asia and provides these services:

### RESEARCH AND DEVELOPMENT

We provide custom-designed testing services for R&D purposes, working with you to create testing based on your specific needs. Some examples of custom testing we have conducted include oxidation testing under applied stress; flow rate, temperature and pressure variations; and chemical exposure. We can also provide testing to ASTM, CSA or other product standards using our expertise in the areas below.

### OXIDATIVE RESISTANCE TESTING

Our advanced performance test facility is one of the largest in the world, capable of accelerated testing of the long-term impact of disinfectants such as chlorine, chlorine dioxide and chloramines on plastic material performance in multiple forms including pipe, fittings and test coupons. We are the only lab in the world that has the capability to test PE pipe for oxidative resistance.



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## CHLORINE AND CHLORAMINE TESTING FOR RUBBER MATERIAL

We test rubber materials for a variety of applications (including faucets, flexible plumbing connectors, valves and fittings) to a variety of standards (including ASTM F2023, ASTM D6284, ASSE 1061 and custom-made test methodologies).



## PRESSURE TESTING

With more than 4,500 stations, our pressure testing facility is the largest in North America. This testing can be used to establish the long-term pressure/stress capabilities of the pipe per procedures such as PPI-TR3, ASTM D2837, ASTM D2992 and ISO 9080. We can also conduct testing to other pressure performance requirements as well as short-term burst testing.



## SLOW CRACK GROWTH (SCG) VALIDATION/ RAPID CRACK PROPAGATION (RCP) TESTING

These tests are critical to understanding the performance of piping, particularly in gas applications. They characterize the long-term and short-term performance of the material, respectively.



## TESTING FOR LARGE-DIAMETER PLASTIC PIPE

At our facility we can test large-diameter plastic piping up to 24" diameter at ambient conditions and up to 24" diameter at elevated temperatures.



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