



November 26, 2018

## Dual Lumen Tubing as A High Pressure Chemical Dispensing Application Solution

By Lily Lei



Public water management is one of the key services every city and municipality provides for their residents. The challenge, among many other factors, is how to maintain public water sanitary standards to ensure safety and high quality while reducing operational costs.

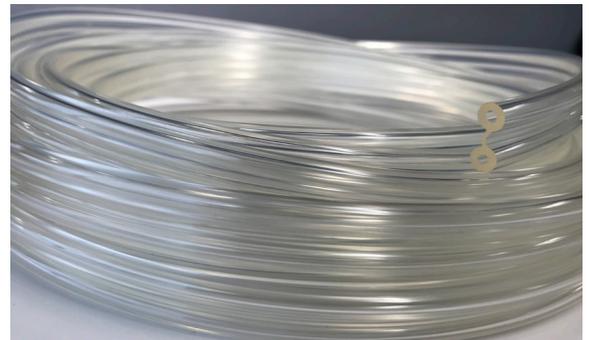
The most common technology city water management authorities utilize to dispense chemicals into the city water is a peristaltic pump, which ensures sanitary standards and water safety for the public. This operation requires high pressure to pump the chemicals into the water system.

Peristaltic pump tubing is usually made of elastomeric materials which offer flexibility and compression performance required by this application. The pressure applied ranges from 87psi (~6 bar) to 116psi (~8 bar). The constant push or squeeze of the tubing also amounts tremendous pressure and wear on the tubing itself.

Since a typical peristaltic pump uses single lumen tubing on its rollers to achieve dispensing needs, the high pressure and flow rate applied to city water chemical dispensing equipment has posed great challenges to both pump manufacturers and their city water management end users. The tubing too often does not live up to the service life expectation of the end users. Frequent service or tubing replacement does not only affect day to day operations; it also adds maintenance costs to city water management providers.

Additionally, these factors impact dispensing system equipment manufacturers in their efforts to build up brand equity by providing quality equipment to meet their customers' expectation.

In order to address these concerns, one of the solutions from Saint-Gobain Performance Plastics has been to introduce a dual lumen tube for use in peristaltic pumps. The dual lumen tube is able to increase the volume of chemicals that can be dispensed while maintaining the pressure and pump life of the tubing to



This solution has enabled pump manufacturers to provide better, long-lasting products to their customers, leading to the reduction of maintenance expenses and replacement tubing costs for their end users. The bottom-line is that the solution has helped cities and municipalities reduce operational costs without compromising the service of safe and high quality public water delivery to the communities.

Saint-Gobain Performance Plastics, a global leader in pump tubing manufacturing, has been working with customers to bring such solutions to the industry. Our **Tygon**<sup>®</sup> tubing has won industry recognition as highly engineered products that satisfy our customers' demanding needs.

For more information about Tygon<sup>®</sup> tubing solutions for high pressure city water management and other chemical dispensing applications, please visit us at [www.processsystems.saint-gobain.com](http://www.processsystems.saint-gobain.com).

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## **About Saint-Gobain**

**Saint-Gobain** designs, manufactures and distributes materials and solutions which are key ingredients in the wellbeing of each of us and the future of all. They can be found everywhere in our living places and our daily life: in buildings, transportation, infrastructure and in many industrial applications. They provide comfort, performance and safety while addressing the challenges of sustainable construction, resource efficiency and climate change. With 2017 net sales of more than \$49 billion, Saint-Gobain operates in 67 countries and has more than 179,000 employees.

**Saint-Gobain's Performance Plastics** business is headquartered in Solon, Ohio, and employs 6,000 people in 22 countries. It is a world leader in high-performance plastics, including flexible tubing, seals, coated fabrics, foams, window film, barrier/release films, tapes, medical components, fluid handling systems and bearings.

**Saint-Gobain's Process Systems** business unit helps customers achieve safety, performance and brand assurance through a broad range of capabilities that rely on superior engineering and customer support. Our product applications include those in the food, beverage, habitat, aerospace, chemical and electronics sectors. We've helped customers in all of these industries achieve goals in innovation, efficiency, sustainability and product integrity through customized solutions such as flexible tubing, gaskets, seals, hoses, fittings, pumps, valves and manifolds.

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