

CASE STUDY

Coax Tubing Solution for
Smoother & Safer Installation
in Fab Hook Up

FURON[®]

Pure Performance

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The Challenge

Tubing flexibility is becoming crucial in an environment where tubing diameters are now at or often above one inch. These diameters help to maintain a fast installation process, save space (lower bend radius) and enable adaptability.

Tubing flexibility became a pain point for one of the largest chips manufacturer while working on a hook up solution in a fab tool installation for its high purity chemical line. In this case, the manufacturer struggled to maintain higher safety and not compromise tubing flexibility.

The Saint-Gobain Design Services Solution

Ultimately the solution needed to be a combination of parameters that were highly quantitative-oriented (flammability, transparency, bend radius...) as well as those that were highly qualitative-oriented (Aging effect, environment effect...). Additionally the solution needed to be guided by the fact that the liquid should only interface with tubing in line with SEMI standard requirements.

At the time, Saint-Gobain's tubing product portfolio included Versilon™ HP PFA Coax, a high purity coax tubing solution, as well as Versilon™ HP PFA 400 tubing, which meets SEMI F57, and Versilon™ HP PFA 400 UC, which meets SEMI C90.

The collaboration between Saint-Gobain and the customer began with the straight forward exercise of creating lists of quantitative and qualitative parameters and reviewing them one by one to determine what test could provide/mimic some of the criteria that needed to be addressed (like impact of the chemical environment, aging impact and so on...).

After carefully determining the blue print, our technical team combined its knowledge of fluoropolymers and blending expertise inherited from our Tygon® product line to produce a unique coax solution to meet the customer's exact needs.

Customer Experience

As a result of the collaboration, Saint-Gobain developed Versilon™ HP PFA Coax Flexon tubing, which has been installed by the customer on a test line with real conditions. Not only did this new high purity, flexible tubing solution achieve positive results for all the requirements determined necessary for the customer's blue print; but there has been no significant increase in the bend radius versus a single tube solution.

