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## **Natvar announces new four- and five-layer coextruded tubing to help medical device manufacturers reduce cost up to 50%, retain/expand performance**

**Clayton, N.C.** (May 12, 2016) —Recently developed four- and five-layer coextruded tubing can help medical device manufacturers reduce costs up to 50%, while retaining—or even expanding—performance capabilities.

Natvar, a Tekni-Plex company, has developed the tubing as an alternative for those applications currently relying on expensive monolayer materials, as well as some two- and three-layer structures. The technology also provides a more cost-effective alternative to expensive braided tubes for higher-pressure delivery systems.

“As medical device companies developed new products, increased their performance expectations—such as barrier, UV, bonding—and pursued cost cutting alternatives, it became obvious that traditional monolayers and some two- and three-layer structures would not meet their objectives,” said Bob Donohue, general manager, Natvar.

Key tubing attributes include flexibility, clarity and ability to be solvent and UV adhesive bondable. Additional desired characteristics could include UV protection and moisture/oxygen barrier. The objective was to develop technically-advanced multilayer coextrusions that would be more cost-effective than their predecessors. This is done by eliminating or minimizing higher price per pound polymers and substituting multiple, less expensive layers that would still deliver desired performance.

Drugs that could benefit from this new technology are those that are delivered at higher pressures, such as contrast media. Traditional three-layer tubes with a polyethylene (PE) inner layer can adequately handle (based on application) up to 1200 pounds per square inch (psi). Drugs requiring pressures in excess of that (such as 1800 psi), typically require a braided tube, which is significantly more expensive.

In addition to medications requiring higher psi for delivery, there are several other drug categories that could benefit from the higher multilayer technology. These could include highly corrosive drugs such as DMSO which need additional protection in the fluid path.

The specific materials used in these four- and five-layer structures are dependent on the application. However, an example is a PE inner layer for inert fluid path delivery/ethylene vinyl acetate (adhesive)/copolyester for barrier and burst strength)/EVA/polyvinyl chloride (outer). A colorant could be added to the middle copolyester layer, as well as a color-coded stripe in the outer layer. Another structure type could include nylon for additional kink resistance and polyurethane for flexibility.

### **About Natvar**

Natvar is a leading global provider of medical tubing for medical devices and related products used in hospitals, physician and dental practices and in-home healthcare. Its unique, precision-crafted tubing is used for applications ranging from chemotherapy to wound care to cardiovascular procedures. With five manufacturing facilities in North and Central America, Europe and Asia, Natvar's global, ISO-certified manufacturing footprint delivers consistent, quality-driven supply worldwide. For more information, visit [www.natvar.com](http://www.natvar.com).

**About Tekni-Plex, Inc.**

Tekni-Plex is a globally-integrated company focused on developing and manufacturing innovative packaging materials, medical compounds and precision-crafted tubing solutions for some of the most well-known names in the pharmaceutical, medical, food and beverage, consumer and specialty-product markets. Tekni-Plex is headquartered in Wayne, Pa. and operates 29 manufacturing sites across nine countries worldwide to meet the needs of its global customers. For more information visit [www.tekni-plex.com](http://www.tekni-plex.com).