Tie Layer

Enhanced Catheter Construction



Delamination is a challenging failure mode in catheter construction; it carries both risk and cost burden for device manufacturers. Detection typically does not occur until final inspection - after catheter assembly is complete - resulting in significant product loss. Delamination can also lead to failures in the field and product recalls.

Addressing this industry need, Zeus has developed a Tie Layer that improves jacket-to-liner bond strength and reduces the risk of delamination. By creating a stronger bond between the outer catheter jacket and inner liner, Tie Layer helps to improve patient safety, enhance catheter performance, and reduce manufacturing costs. Tie Layer is a true total solution in catheter design and manufacturing.

Multiple Options

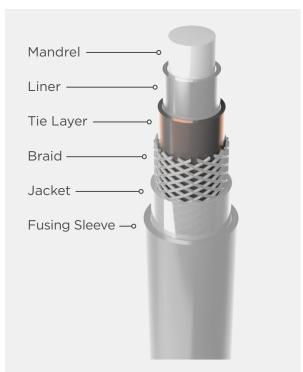
Tie Layer can be applied to almost any round substrate. For catheter construction, products that can be manufactured with a tie layer include:

- Tie layer-coated PTFE liners and multi-lumen tubing
- Tie laver-coated FEP liners
- Tie layer-coated polyimide tubing









Tie Layer creates a melt-bondable surface that improves adhesion to both the liner and catheter jacket during the reflow process.

APPLICATIONS

- Catheter construction
- Improves bondability of component layers in many applications

CAPABILITIES AND SIZING

- Standard OD ranges 0.015" 0.250" (0.381 6.350 mm)
- Thicknesses 0.0001" 0.0003" (0.0025 0.0076 mm)
- Available Tie Layer Materials:
 - Pebax® 35D to 72D durometers
 - Vestamid® 75D (Nylons)

KEY PROPERTIES

- Biocompatible USP Class VI approved material
- Reduces delamination
- Improves bond strength 20 40%
- Increases yields
- Lowers manufacturing cost/scrap
- Tailored catheter performance
- Maintains overall catheter profile

