

# UHMW-PE Protective Piling Covers

**B**ob Yeager, Emerald Bay's Director of Construction, was faced with a problem. The coating on the steel pilings was not standing up to the mechanical and salt-water environment of the floating piers. In addition, the appearance was unfit for a marina of their caliber. The solution would be the first of its kind. Allen Klingensmith of Devcon Construction & Materials Corp., builders of the marina, had to solve the problem. They contacted Fluoron, Inc. inquiring if they could protect the pilings with Ultra High Molecular Weight Polyethylene (UHMW-PE). It's rich, attractive appearance would be very desirable, while providing the best wear protection and corrosion resistance available.



*Fluoron's UHMW-PE covered pilings as seen at the Emerald Bay Marina at Great Exuma, Bahamas.*

Fluoron's U.S. patent #6,471,627B2 was the perfect solution. Fluoron makes thin wall tubing in diameters ranging from 6" to 100". By taking a UHMW-PE sheet with 1/32"-1/8" thickness and seaming it in lengths up to 39' long, Fluoron was able to make protective piling covers.



*Bob Yeager, Emerald Bay's Director of Construction, left, with Randall Chapman, President of Fluoron after inspection of a row of UHMW-PE covered pilings.*

Fluoron's primary business is making heat shrinkable tubing of Teflon®, PTFE and FEP for roll covers in the paper industry.

They started making UHMW-PE tubes because of the materials superior toughness and wear resistance. These characteristics of UHMW-PE made it the ideal product for a marina piling.



*Heat Shrinkable tubing being installed over the existing pilings before being shrunk in place.*

Fluoron has proprietary equipment for seaming tubes from a 1/16" UHMW-PE sheet. Conventional butt-welding equipment is incapable of seaming plastics of this thickness and completely ineffective in seaming UHMW-PE. Fluoron's process makes the tubing heat shrinkable. It can then be shipped for installation at a mill site or marina.

Randall Chapman, president of Fluoron, states, "This new product is available in various colors, such as red and green for channel markers."

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*Roll covers are made with a butt seam. In this application it was desirable to have a cap-strip to provide additional wear resistance at the bearing points.*

**FLUORON INC.**

- **STATIC DISSIPATIVE PTFE & UHMW-PE**
- **UHMW-PE, PTFE, AND FEP HEAT SHRINKABLE TUBING**
- **PRESSURE FORMED TEFLON® AND OTHER FLUOROPOLYMERS**
- **PESSURE SENSITIVE PTFE & UHMW-PE**
- **LARGE DIAMETER TUBES 6" - 100"**
- **WIDE SHEET UP TO 39'**

\*Teflon® is a registered Trademark of E. I. du Pont de Nemours Company and is used for their PTFE, PFA, and FEP

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