

# DuPont™ Teflon®

## Fluoropolymer Resins



## Why there is No Equal to Teflon® PFA HP or Teflon® PFA HP *Plus*

DuPont Teflon® PFA HP and DuPont Teflon® HP *Plus* are unique materials with exceptionally high purity due to DuPont's patented, fully fluorinated process resulting in non-reactive end groups.

- Fully fluorinated polymers are unique and without equal. No other fluoropolymer can have their level of special molecular end groups that enhance purity. That's because they are made with a patented DuPont process and a patented polymer structure.
- Other non- and partially-fluorinated polymers have reactive end groups. Reactive end groups can contribute to contamination in two ways. First, during processing into components, reactive end groups can extract metals from the processing equipment. Metal ions then contaminate finished products. Second, in finished products, reactive end groups can attract and then can release contaminants. This can produce intermittent spikes in levels on contaminants in process fluids, which may upset processes where purity is critical.

DuPont designed Teflon® PFA HP and Teflon® HP *Plus* to meet the needs for highest level of purity, and the Semicon Industry prefers their superior performance in guarding against contamination.

- “High purity” and “ultrapure” have no real meaning unless they are backed up with numerical results. It’s important that contamination be measured on finished products, not only unprocessed or virgin polymer, because contamination is created during processing. Figure 1 – The data compares fluoride extraction with finished tubing for Teflon® PFA, Teflon® PFA HP, and a competitive PFA. Figure 2 compares fluoride extraction for unprocessed polymer with the same polymer after heating to simulate processing conditions.

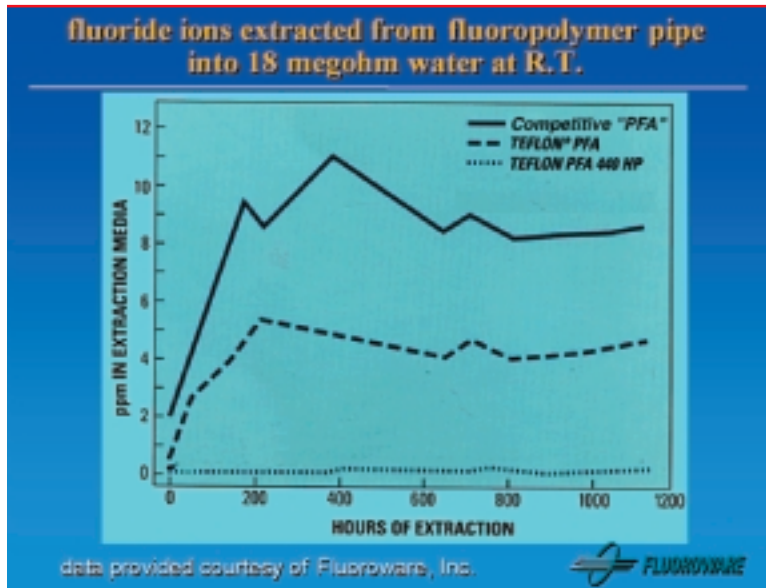


FIGURE 1

**extractable fluoride ions, ppb resin pellets extracted into water / alcohol**

	Teflon® PFA HP	Competitive PFAs	
		A	B
resin samples	<20	<20	2060
after heating 5 minutes at 380°C	133	5080	5140

The miracles of science™

FIGURE 2

For more about Teflon® PFA HP or Teflon® PFA HP Plus, call 800-207-0756 or visit [www.teflon.com/semiconductor](http://www.teflon.com/semiconductor).



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