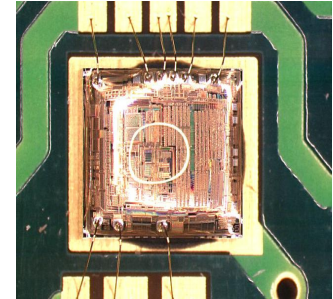


Perfluoro Coating & Potting

Specifically manufactured Perfluorocarbon based coatings by United Adhesives are to provide superior protection of electronic devices, such as dies, chips, PCBs, sensors, etc., from the attacking of chemicals, acids, oils, fuels, corrosive fluids, gasoline, and other corrosive environments.

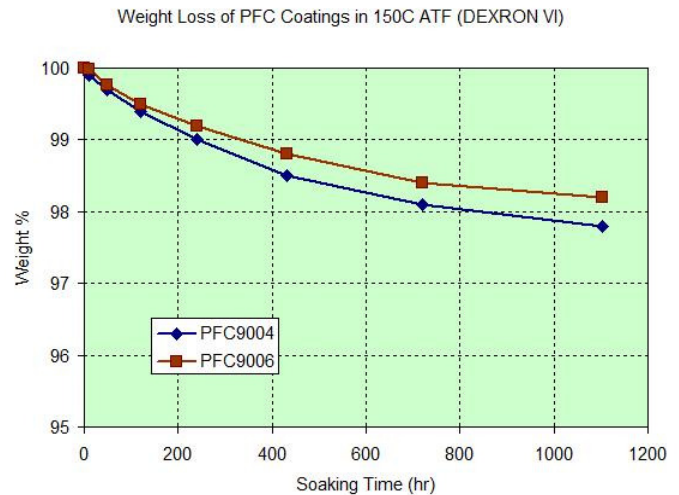
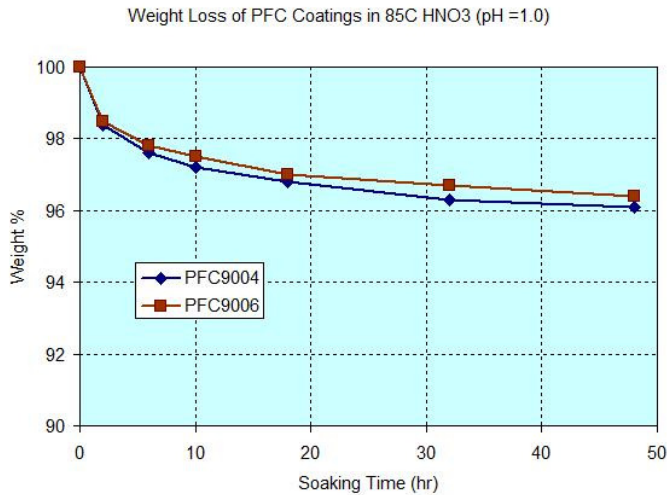
Three coating products are ready for selection. PFC 9002 is solvent-based product for spraying to form a thin-coated layer. PFC9004 is a non-solvent, flowable version for dispensing as conformal coating. PFC 9006 is a thixotropic non-sag formulation for dispensing as “globe-top” encapsulation on local parts such as chips, dies and components to provide superior selective protection.



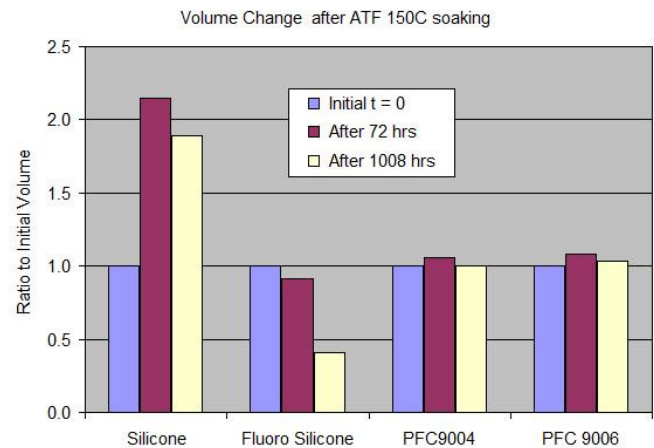
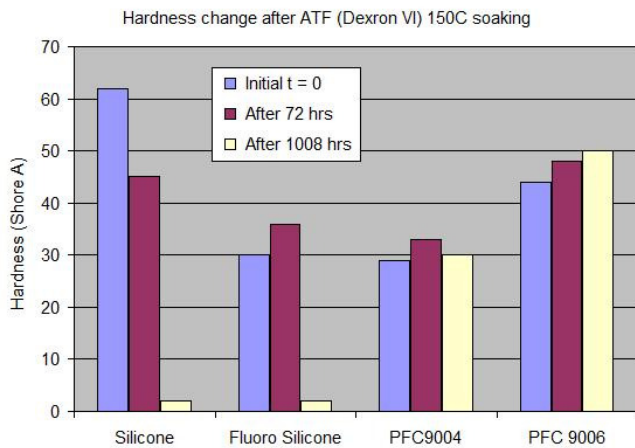
Name	Perfluoro PFC 9002	Perfluoro PFC 9004	Perfluoro PFC 9006
Chemical Base	Perfluoro Carbon	Perfluoro Carbon	Perfluoro Carbon
Features / Advantages	Sprayable Liquid with solvent. Superior chemical, fuels, oil, moisture and media resistance. Excellent high temp stability.	Dispensable / sprayable as conformal coating. Superior chemical, fuels, oil, moisture and media resistance. Excellent high temp stability.	Thixotropic (non-sag) formulation. Dispensable. Superior chemical, fuels, oil, moisture and media resistance. Excellent high temp stability.
Typical Application	For spray-coating of electronic devices to provide superior media corrosion resistance such as oil, fuel and chemicals, etc.	For coating of electronic devices to provide superior protection of dies, components, wire-bonds etc, from chemical, oil, or media attack.	For coating of electronic devices to provide superior protection of dies, components, wire-bonds etc, from chemical, oil, or media attack.
Appearance / Color	Transparent	Transparent	Milky
Rheology	Sprayable	Sprayable, Dispensable	Dispensable Non-sag
Part / Component	One	One	One
Viscosity @25C (cps)	20	200	25,000
Density (g/cc)	1.40	1.42	1.43
Cure Rate	125C 15 min	125C 15 min	125C 30 min
Weight loss in pH=1 Nitric acid @25C 48 hrs	< 5%	< 5%	< 5%
Weight change in Dexron VI (150C 1000 hrs)	< 3%	< 3%	<3%
Storage	< 4C	< 4C	< 4C
Shelf Life (days)	3 month @ 4C	3 month @ 4C	3 month @ 4C
Thermal Stability	-55C to 180C	-55C to 180C	-55C to 180C
Hardness (ASTM D2240)	Shore A = 30	Shore A = 30	Shore A = 45
Volume Resistivity (Ohm-cm)	> 10E13	> 10E13	> 10E14
Dielectric Strength (KV/mm)	> 400 V/mil	> 400 V/mil	> 400 V/mil

► Properties of Fluorocarbon Coatings

Weight loss of perfluoro coating in strong oil and acid



Hardness and volume change of perfluoro coating in transmission fluid (Comparison with regular silicone and fluorosilicone)



Comparison to other coating materials

Properties	Urethane	Epoxy	Silicone	Fluorosilicone	Perfluorocarbon
Resistance to Oils	Poor	Good	Fair	Good	Excellent
Resistance to Acids	Poor	Good	Fair	Fair	Excellent
Resistance to Moisture	Good	Poor	Good	Good	Excellent
Resistance to Chemicals	Poor	Good	Fair	Good	Excellent
Resistance to Salt Fog	Poor	Good	Good	Good	Excellent
Resistance to Heat	Poor	Excellent	Excellent	Excellent	Excellent
Thermal Stress Compliance	Fair	Poor	Excellent	Excellent	Excellent