



1 Retainer for the substrates to be coated.

(height: 20 cm, diameter: 20 cm).

2 Co. Paratech's Parylene Coater Lab Top 3000.

## COATING WITH PARYLENE

Parylene C is an inert, hydrophobic, optically clear biocompatible polymer coating material used in a wide variety of industries. Since it is deposited by vapor deposition, Parylene provides a conformal coating on virtually any substrate material (e. g. metal, glass, paper, resin, plastic, ceramic, ferrite, and silicon). The gaseous nature of the deposition process allows Parylene to penetrate and coat surfaces that are unreachable by liquid coatings, including sharp points and edges, deep cavities, and other hard to reach areas. Its lubricity is close to that of Teflon but Parylene can be applied uniformly in much thinner coatings (0,5 to 30 microns). Parylene's pinhole free conformal coating protects coated substrates from moisture, chemicals, and electric charge. It is a well proven technique since over 30 years and has been used primarily in military, space, and medical technology applications.

### Properties of Parylene C coatings

- barrier to O<sub>2</sub>, CO<sub>2</sub>, moisture, ionic species, chemicals, solvents
- bio-compatible
- chemical and fungal resistant
- abrasion resistant
- completely »pinhole-free«
- hydrophobic
- optical transparent
- low stress
- no outgassing
- extremely high dielectric strength
- mechanically stable between - 200°C and 150°C

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### Typical applications

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- conformal coating for electronic devices in tough environments (meets »MIL-I-46058C, Type XY«)
- dielectric coating (e. g. cores/bobbins)
- hydrophobic coating (e. g. biomedical tubing)
- barrier coating (e. g. filters, membranes, valves)
- microwave electronics
- sensors in tough environments
- space and military electronics for maximum durability endurance
- corrosion protection of metallic surfaces, heat exchangers, etc.
- reinforcement of micro structures
- abrasion resistance
- environmental protection for key pads, rubber, plastics, etc.
- reduction of friction (e. g. catheter guide wires)

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### Service

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We offer development of coatings according to your specifications. Also available is coating service for medium quantities.  
Besides this, we offer micro patterning of parylene coatings.