

FACTS ABOUT CARBOND™ COATINGS

CARBOND COATINGS are manufactured from nitrogenous monomers using a proprietary AMT plasma process. During the manufacturing process, the monomeric vapors are converted into active species that are covalently bonded to the underlying polymeric substrate. The resulting CARBOND COATINGS are of atomic dimension, retain substrate morphology and strength, and are chemically resistant and water wettable.

AMT's CARBOND COATINGS have very high surface energies, and bond well to adhesives, and unlike corona discharge or chemical etchants, retain their properties for many years. AMT's CARBOND COATINGS are suitable for coating non-polar surfaces including PTFE and other fluoropolymers.

Due to their excellent bondability, printability and biomedical compatibility properties, flexible micro and macro-bend strength and excellent thermal and chemical stability, AMT's CARBOND COATINGS find numerous applications in biomedical and other engineering areas.

SIZE CAPABILITIES

Choose from the full range of substrate lengths and diameters available from any supplier of polymeric substrates, tubing or fibers. Can be coated continuously reel to reel.

EXTENSIVE THERMAL PROTECTION

CARBOND coatings generally exceed the thermal resistance of most polymeric substrates.

IDEAL FOR MEDICAL APPLICATIONS

Maintains substrate dimensional and mechanical stability

May enhance cellular growth and biocompatibility

Withstands sterilization by

- Autoclave
- Ethylene oxide

SURFACE PROPERTIES

- Ideal for PTFE and FEP catheter adhesion enhancement
- Ideal for printing on fluoropolymer substrates

CHEMICALLY STABLE COATINGS

- Organic and radiation stabilized
- Retain substrate chemical stability

ADHESIVELY BONDABLE

- Bonds well to most commonly used adhesives

CHEMICALLY BONDED AND LONG LASTING

- Applied uniformly to entire surface
- Covalently bonded
- Does not strip or peel
- Can be applied to fluorocarbon and hydrocarbon substrates including Parylenes

FLUOROPOLYMER MODIFICATIONS

CARBOND coatings can be processed with unique variations and can modify PTFE, PVDF and FEP catheters, tubing and polymer coated wire without harsh etching chemicals.

BIOCOMPATIBILITY

Generally suitable for invasive medical applications:

1. USP Class VI Biological Test for Plastic Materials
 - SYSTEMIC INJECTION TEST
 - INTRACUTANEOUS TEST
 - 14-DAY IMPLANTATION TEST
2. USP14-DAY INTRAMUSCULAR IMPLANTATION TEST
3. CYTOTOXICITY EVALUATION/MEM Elution
4. Human Red Blood Cell HEMOLYSIS TEST

