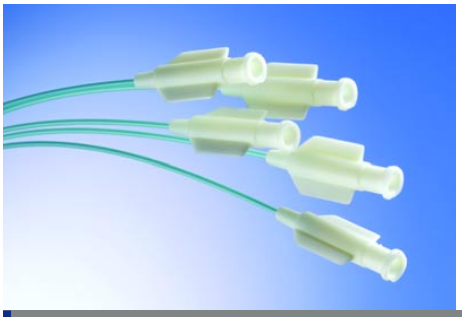


USP Class 6 up to Medical Implantable Grade Coatings

Unmatched Performance of Innovative Medical Coatings

A worldwide network of research and development resources assures the latest technology for customized cost-efficient medical coating solutions.

AMT's innovative medical coatings are manufactured in an unique plasma polymerization deposition process. Monomeric vapors are converted into covalently bonded polymeric coatings directly on the surface of passing tubings/fibers or small components. The unmatched results of this technology are:

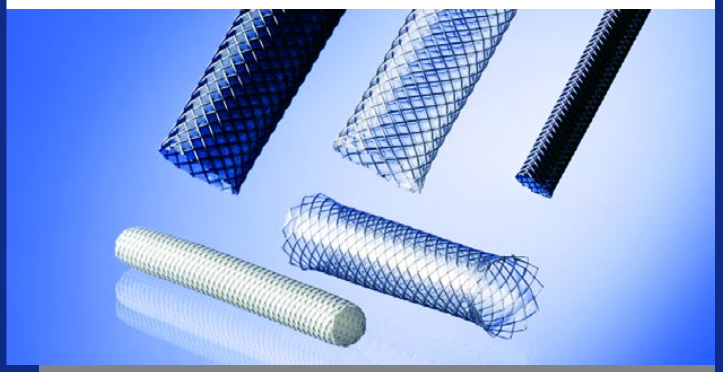
- **Extreme durability** of coatings – no peel or strip off
- **Highly biocompatible**
- **Antithrombogenic properties**
- **Lubricity enhancement**
- **Well-bondable** to a wide variety of materials such as polyurethanes, silicones, fluoro-polymers, polyamides, polymides, PVC, polyesters and polycarbonates.
- **Extreme smoothness and thickness consistency** of complete coating surface
- **Flexible micro and macro-bend strength**
- **Excellent thermal and chemical stability**
- **Resistance to organic solvents**

Biocompatibility & Antithrombogenic Characteristics

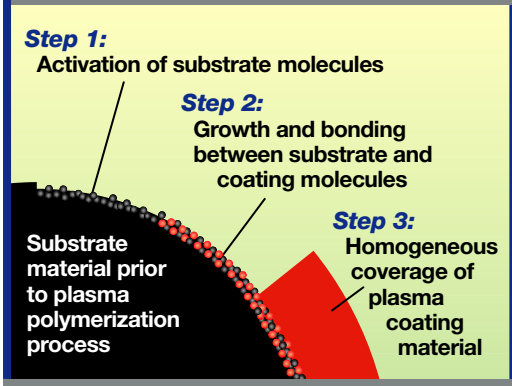
AMT's coatings are blood compatible being used for invasive medical applications. We use standard biomedical industry test procedures to characterize our coatings' properties:

- **USP Class 6** Biological Test for Plastic Materials
  - Systemic Injection Test
  - Intracutaneous Test
  - 14-Day Implantation Test
- **USP 14-Day Intramuscular Implantation Test**
- **Cytotoxicity Evaluation/MEM Elution**
- **Human Red Blood Cell Hemolysis Test**

Our blood compatible surface coatings can be specially prepared with bioactive sites for subsequent binding of anti-thrombogenic agents such as Heparin or the attachment of Monoclonal antibodies.

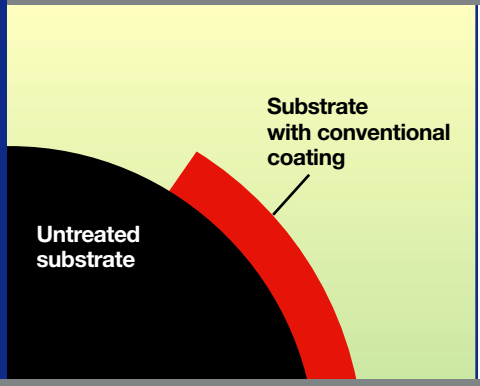


Plasma Polymerization Coating Process VS. *Conventional Coating*



Advantages:

- Excellent bonding – no peel-off
- Unlimited combination of substrates and coating materials



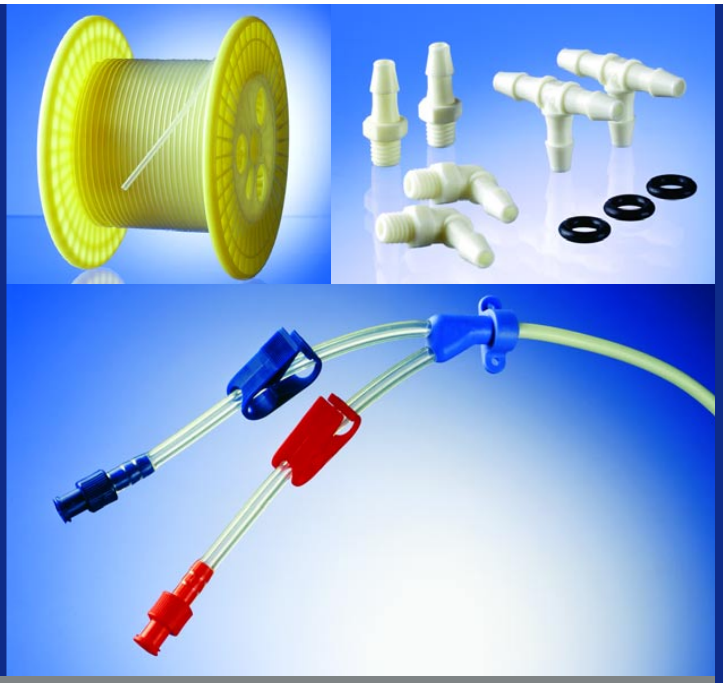
Disadvantages:

- Poor bonding – risk of peel-off
- Bonding limited to certain substrates and coating materials

GMP and Clean Room Manufacturing

All coatings are applied under a **very stringent quality assurance** program. Cleanroom manufacturing capabilities (CLASS 1,000) – including GMP – assure precision and consistently high quality. Spooled products are labeled with **Lot traceability** on every fiber/tubing shipment. A similiar procedure is also available for batch production of small components.

AMT can coat the full range of substrate lengths, thicknesses and diameters available from any supplier of **tubing, fibers and flat film material**. Batch production is also available for small components such as **o-rings, valves, fittings, seals and stents**.



Coating Selection Matrix

	Silglide	Carbond	Fluorcarb	Parylene	Metal/Noble
Bio Compatibility	Excellent	Excellent	Excellent	Excellent	Very Good
Lubricity	Excellent	Fair	Fair	Excellent	Fair
Bondability	Very Good	Excellent	Fair	Poor	Good
Teflon Bondable	No	Yes	N.A.	No	Yes
Antimicrobial	N.A.	N.A.	N.A.	N.A.	Excellent
Antithrombogenic	Excellent	Very Good	Excellent	Excellent	Good
Absorption	Very Good	Good	N.A.	N.A.	Very Good
Drug Release	Good	N.A.	N.A.	Excellent	N.A.
Insulation	Fair	Fair	N.A.	Excellent	Very Poor
Conductivity	N.A.	N.A.	N.A.	Very Poor	Excellent
Durability of Coating	Excellent	Excellent	Excellent	Excellent	Excellent
Chemical Resistance	Very Good	Excellent	Excellent	Excellent	Excellent
STERILIZATION					
Autoclave	Yes	Yes	Yes	Yes	Yes
Ethylene Oxide	Yes	Yes	Yes	Yes	Yes
Gamma Radiation	Yes	Yes	No	Yes	Yes

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