



# INNOVATIVE COATINGS FOR THE MEDICAL INDUSTRY: ENHANCING DEVICE PERFORMANCE

Advanced coatings are revolutionizing medical devices—here's how these innovations are enhancing their performance:

## THE ROLE OF COATINGS IN MEDICAL DEVICES

### Key Benefits:

- Enhances device functionality.
- Extends product lifespan.
- Improves patient outcomes.



## REDUCING FRICTION AND PATIENT DISCOMFORT

### Low-Friction Coatings:

- Applied to devices like needles, guidewires and catheters.
- Reduces resistance during device insertion.

### Results:

- Less pain during procedures.
- Faster recovery and reduced tissue damage.



## IMPROVING WEAR RESISTANCE FOR LONGER DEVICE LIFE

### Wear-Resistant Coatings:

- Applied to components and surgical tools.
- Permanently bonded for durability.
- Low friction, non-stick and flexible.

### Impact:

- Extends lifespan, lowering replacement costs.



## EXPANDING DEVICE AND COMPONENT APPLICATIONS

### Metal Substrates:

- Guidewires, needles, mandrels, coils, hypotubes, cables and more.
- Stainless steel alloys, tungsten, titanium, nitinol and more.

### Silicone and Rubber:

- Catheters, o-rings, seals/gaskets, cannulas, tubing, valves and more.



## THE SCIENCE BEHIND COATING TECHNOLOGIES

### Application Techniques:

- Electrostatic spraying, dip coating and ultra-thin film.

### Coating Technologies:

- PTFE, ceramic, silicone.
- Water-, solvent- and powder-based.
- Biocompatible, PFOA-free and PFOS-Free.



## THE FUTURE OF MEDICAL DEVICE COATINGS

### PFAS-Free Coatings:

- Sustainable, compliant alternatives to traditional PTFE.

### Custom Formulations:

- Wider variety of options for new product designs.



## THE IMPACT OF INNOVATIVE COATINGS

- **Transforming Devices:** Improves performance, safety, longevity.
- **Better Healthcare:** Leads to improved patient outcomes.

