

Inert CVD Coatings Material Compatibility with SilcoTek® Process

- Corrosion – Antifouling
- Inertness – Ultra-high vacuum

	Recommended	Marginal/Poor	Not Treatable	
300 series stainless steel	●			Extensive experience with 316 and 304 grades
400 series stainless steel	●			Good results but limited experience
Carbon steel	●			Requires special processing
Hastelloy®	●			Good results but limited experience
Inconel®	●			Good results but limited experience
Monel®		●		Poor results, limited experience
Platinum	●			Good results but limited experience
Gold			●	Not treatable, process temp will damage part
Silver			●	Not treatable, process temp will damage part
Aluminum		●		Process temp can damage part, alloy dependent
Borosilicate Glass	●			Breakage may occur during processing
Nickel			●	Not treatable
Brass			●	Not treatable
Copper & Copper alloys			●	Not treatable
Zinc			●	Not treatable
Bronze			●	Not treatable
Plastics			●	Not treatable
Plated materials			●	Process temp can damage plating
Carbon	●			Good results but limited experience
Ceramics	●			Good results but limited experience
Lead & Lead Alloys			●	Not treatable
Titanium	●			Good results
Surface Finish				
Electropolished Surface	●			Impurities from e-polish process may interfere with process
Polished Surface	●			Excellent results
Bead Blasted	●			Excellent results, coating appearance proportional to surface roughness
Machined	●			Excellent results, coating appearance proportional to surface roughness
Cast Surface	●			Good results, cast surface requires thicker film to ensure coverage
Painted/Coated surface			●	Not treatable, process temp will damage painted/coated surface
Welded or Brazed Areas				
Vacuum-Nickel Brazing	●			Excellent results
TIG/MIG Weld	●			Acceptable, may see coating variance at weld
Silver Solder		●		Solder outgassing, poor results
Bronze Solder			●	Not compatible with treatment process
Common Lead/Tin Solder			●	Not treatable, process temp will melt solder

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Inconel and Monel are trademarks of Inco Alloys International, Inc.

If you have questions, please call Tech Service at 814-353-1778 or e-mail us at Silcod@SilcoTek.com