

# CatArc® TiN COATING

## Cathodic Arc Deposition: Titanium Nitride

CatArc® TiN was the first coating deposited using VTI®'s patented switched cathodic arc process. Its low deposition temperature of 400°F makes it ideal for temperature sensitive tool steels. CatArc® TiN is ideal for most general purpose machining, injection molding and moderate forming applications.

### Features and Benefits

- Low Coefficient of Friction
- Dense Microstructure
- Resists Abrasive Wear
- Toughness
- Resistant to Galling

### Properties

- Coating Chemistry: Titanium Nitride (TiN)
- Composition: Single Layer
- Color: Gold

### Specifications

- Standard Thickness: 1.0 - 2.0 Microns (.00004 - .00008 Inches)
- Application Range: 1.0 - 5.0 Microns (.00004 - .0002 Inches)
- Micro-Hardness: 2700 Vickers
- Temperature Stability: 450 °C (842 °F)
- Coefficient of Friction: .39 to .42

### Applications

- Drilling
- Tapping
- Milling
- Reaming
- Turning
- Metal Forming
- Punching
- Plastic injection mold cavities
- Hot runner nozzles

### Work Piece Materials

- Die Steel
- Copper
- Stainless Steel
- Brass
- Carbon Steel
- Bronze

### Tooling Materials

- A2, D2, S-Series, H13, O1
- CPM, 4140, 4340
- High-speed Steel
- Carbide
- Brazed Carbide
- Powdered metals



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