### PVD Properties and Applications

<table>
<thead>
<tr>
<th>Coating Material</th>
<th>Coefficient of Friction</th>
<th>Micro Hardness (Vickers)</th>
<th>Coating Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CatArc® TiN</td>
<td>2800</td>
<td>2450</td>
<td>Low deposition temperature of 400°C makes it ideal for temperature sensitive applications. Attractive light gold color and is used in wear-resistant decorative applications and medical tools. Due to its high lubricity, it is a good candidate for machining non-ferrous metals such as titanium, brass, copper, and aluminum.</td>
</tr>
<tr>
<td>CatArc® ZrN</td>
<td>3200</td>
<td>3400</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
<tr>
<td>CatArc® TiCN</td>
<td>3200</td>
<td>3400</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
<tr>
<td>CatArc® CrN</td>
<td>3200</td>
<td>3400</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
<tr>
<td>CatArc® AlTiN</td>
<td>3200</td>
<td>3400</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
<tr>
<td>CatArc® Black Cat</td>
<td>3200</td>
<td>3400</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
<tr>
<td>Sputtered TiAlN</td>
<td>3600</td>
<td>3000</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
<tr>
<td>Sputtered TiB2</td>
<td>3600</td>
<td>3000</td>
<td>Used for machining non-ferrous metals such as stainless steels, cast iron, and hardened tool steels up to approximately 60 HRC.</td>
</tr>
</tbody>
</table>

### Coating Services

Innovative Coatings for all applications needing reduced wear, improved lubricity, and corrosion resistance.

The benchmark in high performance hard coatings

**MADE TO SPECIFICATION**

Vergason Technology, Inc.  
166 State Route 224, Van Etten, NY 14849 USA  
info@vergason.com

ISO 9001:2008 Certified  
TS16949 Compliant  
Federal Firearms Licensed

**Vergason Technology Incorporated**
PVD Coating Services

Why VTI?

Service
- Our standard turn-around time is 3-5 business days. We offer expedited next-day service as well as time-critical same-day service for parts that need immediate attention.

Technology
- VTI’s patented CatArc® switched-arc coating technology produces denser and smoother coatings than our competition.
- We also offer coatings produced via DC Magnetron Sputtering which have outstanding performance in certain metal cutting/punching/stamping applications.

Quality
- We are ISO 9001:2008 Certified. In addition we have passed numerous audits which allow us to supply the automotive and truck industries in the USA and in Europe, the medical equipment industry, and the aerospace industry.
- We hold a Federal Firearm License and are ITAR Registered so we can support our military and law enforcement communities.

Versatility
- We develop specialty coatings when needed. Whether it is corrosion protection for firearms, or high heat performance in engine exhaust components, we can tailor coatings to applications.

Reliability
- VTI has been in the PVD Coating Services business since 1986. We have successfully served thousands of customers by coating millions of parts.

Benefits
- Dramatic improvement in tool life
- Higher speeds and feeds
- Corrosion protection
- Reduced friction
- High-heat resistance
- Decorative colors
- Minimal dimensional changes
- Low coating temperatures for sensitive parts
- Strip & recoat multiple times

Unsurpassed Customer Service

Through careful and committed input from our engineering team, VTI coatings services offer superior support and service to all our clients. With hundreds of combined years of engineering and coatings services experience, our support team can manage and track every aspect of your project from initial order intake, to final delivery, even over-seas.

Innovative Coatings for all your hard coating needs.

At VTI, Physical Vapor Deposition coating services are our passion. Our coating services are designed for the medical, automotive, aerospace, electronics, lighting, decorative/novelty/awards, packaging, sporting goods, appliances, toys, tooling, molds, and dies—every conceivable place where coatings can be applied, we’re creating coatings that meet the needs of all types of industries.

Our proprietary BlackCat™ Gun Coatings were specially designed for the exigencies of military combat firearms. We offer PVD coatings with different finishes and colors which impart dramatically improved corrosion resistance coupled with extremely high service temperatures.

Our patented CanArc® and sputtering coating technologies offer a wide range of options in the hard coating category. With CanArc® ceramic coatings, we can dramatically extend tool and appliance life by reducing friction and improving thermal isolation, which is especially important in injection molding applications.

Our high-energy sputtering technology is primarily used in metal cutting tool applications. These smooth, very hard coating compositions include combinations of Al2O3, TiN, TiCN, and TiB2, and show greatly reduced wear, and exhibit outstanding longevity.

Through sputtering, evaporation, or cathodic arc, our coating technology can be applied to a wide range of substrates to solve a multitude of problems related to wear, corrosion, temperature, and friction.

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607.589.4429