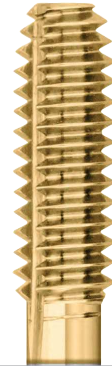


Titan USA tools are coated in our state-of-the-art coating center, providing customers with uninterrupted production of the industry's highest quality PVD coatings. This allows us to maintain a robust level of inventory available to our valued customers.

# Titan USA Coatings

## PVD COATINGS



	AICrO-MAX	AlTiN	TiCN	ZrN	TiN
<b>Color</b>	Gray/Charcoal	Gray/Blue	Gray/Silver	Light Gold	Gold/Yellow
<b>Materials</b>	Ferrous materials: high-temp alloys, stainless steels, alloy steels, cast iron, high temp. nickel base alloys, titanium alloys, and inconel	Ferrous materials: high-temp alloys, stainless steels, alloy steels, cast iron, high temp. nickel base alloys, titanium alloys, and inconel	Ferrous materials: stainless steels and a wide variety of other materials where AlTiN cannot be used	Non-Ferrous: aluminum, brass, bronze	Non-Ferrous
<b>Application/ Benefits</b>	<ul style="list-style-type: none"> <li>High-performance coating with a titanium top nano-layer for higher abrasion resistance</li> <li>Max temperature: 950°C</li> <li>Post-polish treatment to maximize chip evacuation at high speeds and feeds</li> </ul>	<ul style="list-style-type: none"> <li>Excellent for milling, drilling, and tapping</li> <li>Excellent high temperature resistance and hardness</li> <li>Excellent in dry machining</li> </ul>	<ul style="list-style-type: none"> <li>Used in milling, drilling, and tapping</li> </ul>	<ul style="list-style-type: none"> <li>Higher hardness adds lubricity and abrasion resistance</li> <li>Prevents edge build up in softer gummy alloys</li> <li>Allows for higher speed and feed rates</li> <li>Prolongs tool life</li> </ul>	<ul style="list-style-type: none"> <li>General purpose coating used for milling, drilling, and tapping with lower cutting speeds</li> </ul>

## Titan USA Finishes



### Black Oxide Finish

Acts as a solid lubricant and also retains liquid lubricant at cutting edges prevents chip welding, reduces friction and acts a thermal insulator.



### Nitride/Steam Oxide Finish

Combines the advantages of the lubricity of oxide with the abrasion resistance of nitride.



### Black & Gold Oxide Finish

Resists corrosion and breakage while increasing lubricity. This finish is not prone to chipping and flaking.



### Gold Oxide Finish

Extends tool life, and improves lubricity, and reduces grinding stresses.

