

# PVD Coatings



## The Evolution of Metal Molds, Dies & Tooling Components



TechCoat 100 (TiN)

TechCoat DLA 200 (DLC)

TechCoat 200 (TiCN)

TechCoat 300 (AlTiN)

TechCoat 400 (CrN)

TechCoat 500 (ZrN)

Check out the PVD Coating Specifications for these engineered finishes on back.

### Coating Specification:

- AMS 2444

### Benefits:

- Reduction of friction
- Improved lubricity
- Abrasion & wear resistance
- Better release of plastic parts
- Less galling and die polishing
- Reduces downtime

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*To Be So Good  
Our Customers  
BRAG About Us!*

**Physical Vapor Deposition (PVD)** is widely becoming the coating of choice for the manufacturing industry, specifically being used with molds, dies and tooling components.

When compared to legacy plating processes, PVD coatings offer improvements in **lubricity** and the **release of plastic parts**. This thin film coating also provides an excellent **resistance to abrasion and wear** – making it the logical solution.

When applied to a base metal, PVD coatings provide hard, wear-resistant surfaces that don't interact with the materials they cover – dramatically **reducing friction** and **prolonging the life of the part**. This is just one of the many reasons it's use is growing in the mold and die industry.

Techmetals has over 50 years experience in metal plating and our processes are backed by certifications with the industry's most stringent testing facilities.

You can rest assured that Techmetals' PVD coatings will add greater efficiency, durability and value for your mold or die casting projects.

# PVD Coating Chart

Our Research & Development Team help countless clients every day – developing and customizing plating solutions to meet their specific needs. We listen carefully to your unique applications and help develop an affordable solution from concept through completion!

Coating Type	Color	Hardness (Hv)	Thickness (µm)	Coefficient of Friction	Max Usage Temp (°F)	Description	Applications
TechCoat DLA 200 (Diamond Like Alloy)	Charcoal Gray	2500 - 3300	1 - 5	0.10	750°	Coating with high mechanical hardness and very low coefficient of friction	Aerospace, Medical, Optics, Molding, & Stamping
TechCoat 100 TiN (Titanium Nitride)	Gold	3100 - 3200	1 - 5	0.55	1100°	Universal coating for all applications	Medical, Molding and Cutting
TechCoat 200 TiCN (Titanium CarboNitride)	Rose	3100 - 3200	1 - 5	0.20	750°	Coating with high hardness and lower coefficient of friction	Low Temp. Stamping, Forming & Cutting
TechCoat 300 AlTiN (Aluminum Titanium Nitride)	Charcoal Gray	3100 - 3300	1 - 5	0.70	1600°	High temperature and high hardness coating that provides increased performance in high speed machining	Machining, Stamping, & Sawing
TechCoat 400 CrN (Chromium Nitride)	Silver	1800 - 2000	1 - 5	0.30	1300°	Ductile coating with high release properties	Die Casting, Molding & Stamping
TechCoat 500 ZrN (Zirconium Nitride)	Pale Gold	1900 - 2100	1 - 4	0.40	1050°	Coating with good lubricity	Medical & Machining

## TechCoat 100 (TiN) **Medically Validated**

TechCoat 100 is a proprietary general purpose coating providing universal improvement for most wear applications. Used within the medical, molding and cutting industries.

## TechCoat DLA 200 (DLC) **Medically Validated**

TechCoat DLA is a proprietary Diamond Like Alloy coating series utilizing the latest coating technology to provide an extremely effective solution for high wear, high friction and surface roughness problems. Industries utilized include: aerospace, automotive, medical, optics, injection molding, die casting and more.

## TechCoat 200 (TiCN) **Medically Validated**

TechCoat 200 is a proprietary hard purpose coating with a low coefficient of friction. Industries utilize in low-temperature applications for stamping, forming and cutting.

## TechCoat 300 (AlTiN)

TechCoat 300 is a proprietary high-temperature, high hardness coating provides increased performance for high-speed machining, stamping and sawing applications.

## TechCoat 400 (CrN) **Medically Validated**

TechCoat 400 is a proprietary high performance, hard coating provides increased performance for optimal release characteristics in molding and stamping applications.

## TechCoat 500 (ZrN)

TechCoat 500 is a proprietary high performance coating with great lubricity. It provides increased performance within the medical and machining industries.

