

ACT

ADVANCED COATING TECHNOLOGIES, INC.

AUTOMOTIVE

Car and truck manufacturers are tasked with improving the efficiency of automotive components without compromising performance levels.

Our PVD coatings provide increased wear resistance, reduced friction and are designed to reduce energy losses of the valve train components and engine bearings. Additionally, our coatings are designed for pistons, bushings, camshafts, gears and most sliding or rotating parts.

Some of the coatings offered to improve the life of these parts include CrN, TiN, TiCN, Molybdenum Disulphide (MoS₂) & DLC based coatings.

WHY ADVANCED COATING TECHNOLOGIES:

- Industry Leading Research and Development Team
- PVD and DLC Coating Capabilities
- Extensive Material Coating Testing
- Enhanced Quality Control & Quick Turnaround
- Ph.D. Scientist on staff
- AS9001 & AS9100 Certified

ADVANTAGES OF COATING

- Uniform & Conformal Coating
- Reduced Friction
- Increased Productivity
- Corrosion Resistance
- Increased Quality & Performance

Dr. Andreas Schuetze,

VP of Technology and Lead Scientist

- Master's Degree in Physics and Ph.D. in Mechanical Engineering
- (4) Registered Patents and more than (20) Published Papers
- Contributor / Professor at UCLA & Technical University, Zurich
- Former head of Research & Development at OERLIKON (Balzers)

You make it First... We make it *Last!*

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Common Coatings - Automotive/High Performance

Average coating thickness = 2 microns

Coating	Coating Material	Color	Hardness [HV]	Friction Coefficient	Thickness [Microns]	Max. Working Temperature	Characteristics	Common Use
TiN	Titanium Nitride	Gold	2400	0.50	1-7	600c - 1100f	The General Purpose Coating	Steels - Cast Iron - Aluminum - Bronze - Copper
ALTiN/TiAlN	Aluminum Titanium Nitride	Dark Grey	3400-3600	0.60	1-4	700c - 1300f	Universal High Performance Coating	Steels - Copper
TiCN	Titanium Carbonitride	Silver Grey	3500	0.25	1-4	400c - 750f	Conventional Coating	Steels - Alloyed Steels - Superalloys - Cast Iron - Wood - Bronze - Copper - Aluminum
ZrN	Zirconium Nitride	Light Gold	2400	0.30	1-4	550c - 1300f	Monolayer Ti or Cr based adhesion layer	Steels - Alloyed Steels - Superalloys - Cast Iron - Wood - Bronze - Copper - Aluminum
CrN	Chromium Nitride	Silver Grey	1800	0.30	1-4	700c - 1300f	Standard Coating for Non-Cutting Application	Steels - Copper
DLC	Diamond Like Carbon	Dark Grey	2400-4000	0.1-0.2	1-8	200c - 400f	Ultimate Performance Coating	Low Friction Properties - Molds & Mold Components - High Performance Moto & Auto - Aerospace - Bearings
DLC Plus	Diamond Like Carbon	Black	2400-4000	0.1-0.2	1-8	200c - 400f	Ultimate Performance Coating	Low Friction Properties - Molds & Mold Components - High Performance Moto & Auto - Aerospace - Bearings
NACO	Titanium Aluminum Silicon Nitride	Dark Grey	4500	0.45	1-4	1200c - 2200f	Extremely High Hardness	Steels - Alloys - Hardened Steels
NACRO	Titanium Aluminum Chrome Nitride	Dark Silver	4500	0.45	1-7	1100c - 2000f	Extremely High Hardness	Steels - Alloys - Hardened Steels - Cast Iron
ALTISIN	Aluminum Titanium Silicon Nitride	Dark Grey	4500	0.45	1-4	1200c - 2200f	Extremely High Hardness	Dry Milling - High Speed Ops
TiCN Red	Titanium Carbonitride	Rose	3800	0.25	1-4	400c - 750f	Conventional Coating	Steels - Alloyed Steels - Superalloys - Cast Iron - Wood - Bronze - Copper - Aluminum
NACO-Blue	Titanium Carbonitride	Blue Tint	3800	0.25	1-4	400c - 750f	Conventional Coating	Steels - Alloys - Hardened Steels
Warrior	Proprietary	Copper	Proprietary				Universal High Performance Coating	Cutting Tools - Weaponry