eifeler

CUT PRECISELY
CUT SMARTER

Cut with eifeler

voestalpine High Performance Metals LLC
www.eifeler.com/northamerica

voestalpine
ONE STEP AHEAD.

WHY PVD MATTERS IN CUTTING TOOLS

In the cutting tools industry, precision isn't optional – it's everything. Whether you're manufacturing tools or using them in high-performance machining, your success depends on how well your tools resist wear, manage heat, and maintain cutting integrity.

That's where eifeler comes in. With over 40 years of PVD coating expertise, we help cutting tool manufacturers and end users achieve outstanding results. Our coatings are engineered to combat the most aggressive wear mechanisms – abrasion, adhesion, oxidation, and thermal stress – ensuring longer tool life, better surface quality, and more stable processes.

We don't just coat tools. We elevate performance.

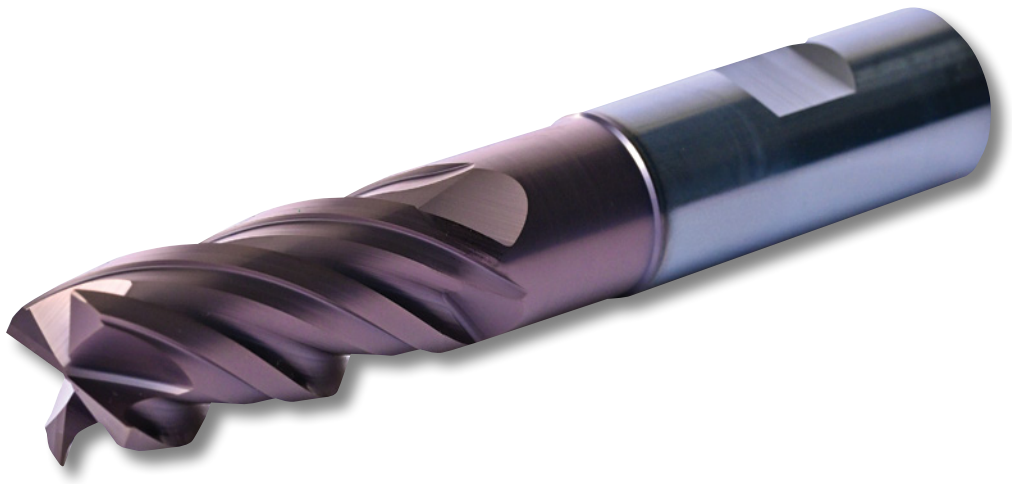
OUR NEWEST COATINGS!

ARDURO® – Built for hard machining

Machining hardened steels above 55 HRC pushes tools to their limits. ARDURO® is our next-generation Arc-PVD coating, developed specifically for dry and high-speed operations in hard machining.

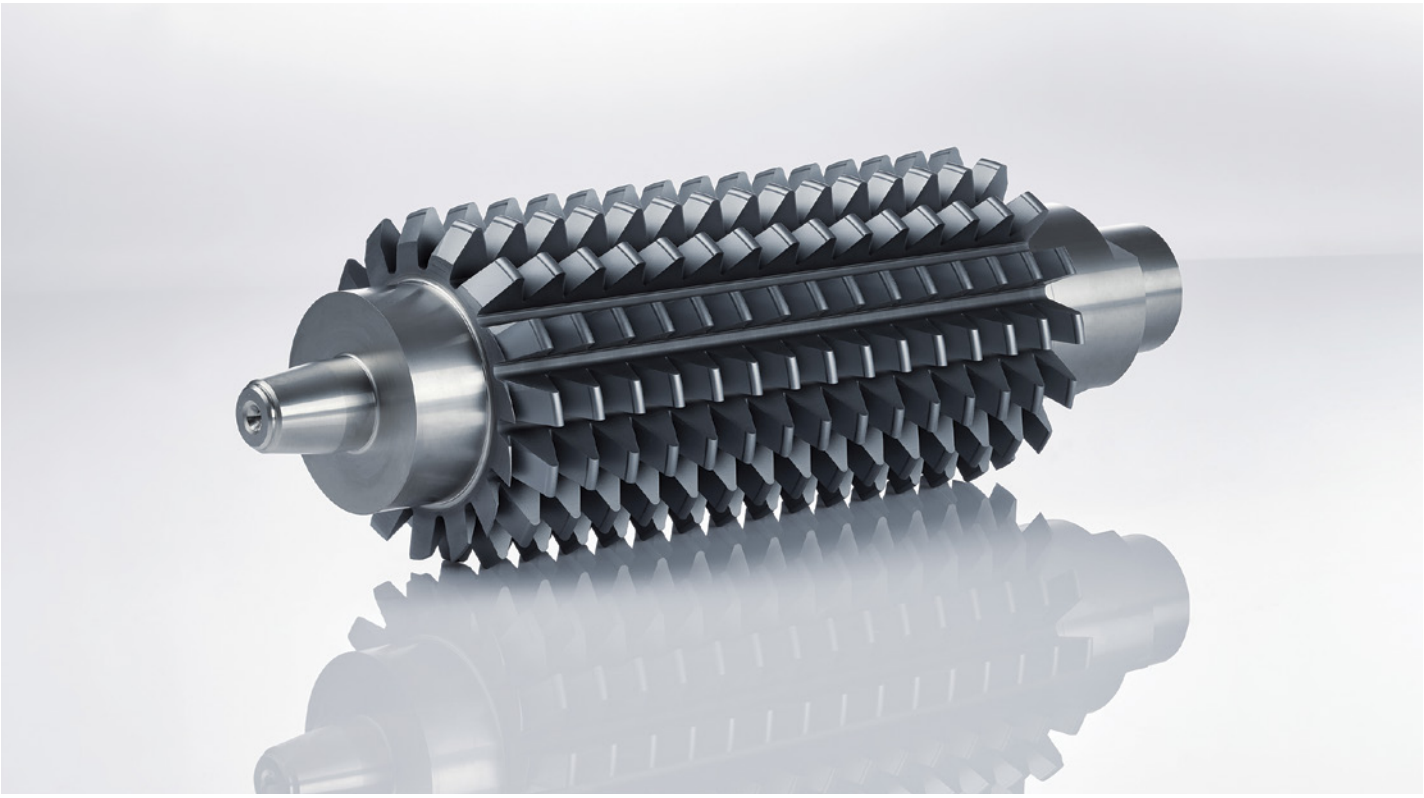
Application range:

- Endmills, micro tools, twist drills, taps
- Machining of hardened tool steels (>55 HRC), nickel-based alloys, titanium alloys, cast iron



SUBLIME® – Precision under pressure in gear manufacturing

Gear cutting demands more than sharp edges – it demands coatings that perform under extreme thermal and mechanical stress. Whether in dry or wet machining, tools face intense heat, high speeds, and aggressive wear.



Designed for gear cutting, SUBLIME® excels in resisting abrasive damage and crater wear thanks to its composition, structure and low thermal conductivity. This targeted protection translates into extended tool life and reliable performance even under the toughest conditions.

Application range:

- Gear cutting – dry and wet
- High speed milling and drilling

OUR COATINGS FOR CUTTING TOOLS

TiN

Coating Composition	TiN
Hardness (HV)	2,300 ± 300
Coating Thickness (µm)	2 – 4 µm
Max. Operating Temperature	500°C / 900°F
Coefficient of Friction (dry)	0.6
Color	gold
	*ultrafine available

Main features:

- Wear-resistant coating
- Prolongs tool life
- Gold color signals wear for timely maintenance
- Reduces friction
- Improves surface quality
- Compatible with various materials

EXXTRAL®

Coating Composition	AlTiN-based
Hardness (HV)	3,300 ± 300
Coating Thickness (µm)	2 – 5 µm
Max. Operating Temperature	800°C / 1,470°F
Coefficient of Friction (dry)	0.7
Color	anthracite
	*ultrafine available

Main features:

- Engineered for dry, high-speed machining
- This hard coating excels in extreme conditions
- Boosts tool life
- Improves surface finish
- Performs reliably without cooling lubricants – even under high heat and oxidation

EXXTRAL®-Plus

Coating Composition	AlTiN Multilayer
Hardness (HV)	3,300 ± 300
Coating Thickness (µm)	2 – 5 µm
Max. Operating Temperature	800°C / 1,470°F
Coefficient of Friction (dry)	0.7
Color	anthracite

Main features:

- High thermal stability allows for elevated working temperature compared to TiAlN
- Suitable broad band coating for milling of various steels, including carbon steel, alloy steel, stainless steel as well as gear hobbing
- Enables dry machining

SISTRAL®

Coating Composition	AlTiXN Nanostructured
Hardness (HV)	2,500 ± 300
Coating Thickness (µm)	1 – 4 µm
Max. Operating Temperature	900°C / 1,650°F
Coefficient of Friction (dry)	<0.7
Color	anthracite
	*ultrafine available

Main features:

- Excel especially when dealing with milling of steel up to 55 HRC
- Particularly effective in dry machining applications at high speeds

SISTRAL®-Gold

Coating Composition	AlTiXN Nanostructured
Hardness (HV)	3,000 ± 500
Coating Thickness (µm)	1 – 4 µm
Max. Operating Temperature	900°C / 1,650°F
Coefficient of Friction (dry)	0.6
Color	gold
	*ultrafine available

Main features:

- Ideally suited for machining difficult materials such as VA steel, titanium or inconel
- Its thermal resistance and hot hardness deliver superior performance compared to traditional coatings

ARDURO®

Coating Composition	AlTiSiN-based
Hardness (HV)	~3,200
Coating Thickness (µm)	1 – 5 µm
Max. Operating Temperature	1,100°C / 2,012°F
Coefficient of Friction (dry)	0.02 ± 0.01 on polished surfaces
Color	caramel bronze

Main features:

- Characterized by outstanding oxidation resistance up to 1,100°C
- Exceptional hardness, and superior wear protection
- Ideal for hard machining of steels >55 HRC, nickel alloys, titanium, and cast iron, even in dry and high-speed conditions
- The very low surface roughness promotes its use on microtools

SUBLIME®

Coating Composition	AlCrTiXN-based
Hardness (HV)	3,300 ± 200
Coating Thickness (µm)	3 ± 1
Max. Operating Temperature	1,100°C / 2,012°F
Coefficient of Friction (dry)	0.7 – 0.8
Color	gray

Main features:

» Distinguished by an impressive resistance to oxidation, high hardness, and excellent abrasion resistance

» Optimum for gear cutting operations and equally suitable for high-speed milling and drilling across a broad spectrum of materials, including Ni-based alloys and Ti

NONFERROUS APPLICATIONS

PVD Coating	**ZrN**	**DLC: SUCASLIDE®**	**DLC: CARBON-X®**
Coating Composition	ZrN	a-C: Me	a-C: H
Color	pale yellow	black	dark gray

MICROTOOLS

PVD Coating	**SISTRAL®-ultrafine**	**TiCN**	**ARDURO®**
Coating Composition	AlTiXN Nanostructured	TiCN (ML)	AlTiSiN-based
Color	anthracite	blue gray	caramel bronze
		*ultrafine available	

Our **ultrafine coatings** are the solution for Microtools and threading tools.

ultrafine is our special PVD arc deposition technology, delivering outstanding coating properties in terms of surface quality, density, and low friction – enabled by an innovative control mechanism of the process gases.

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Serving with care. Coating with excellence.

SCAN TO LEARN MORE

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