COATINGS

To optimize machining results and achieve a constant increase in productivity, professionals rely on coatings that significantly increase tool life, even in extreme conditions when cooling or lubrication is not enough.

Helion Tools coatings are specially adapted to the different materials to be machined, they are designed with very specific composition characteristics that even adjust to the geometry and precision of the tool according to the machining process, improving its functionality. They are high performance heat resistant coatings for longer life.

Advantages of an optimal coating

- They increase the hardness of the surface, which makes the piece better tolerate friction due to abrasion.
- They reduce the coefficient of friction that facilitates the sliding of the chip in its evacuation, at the same time that it reduces the generation of heat due to the ease in the chip exit.
- Reduces cutting forces and prevents adhesion between contact surfaces.
- They provide a chemically inert surface that does not allow chemical affinity with the material to be machined.
- Coated tools resist corrosion and rust.
- High tenacity, so that they can be deformed without breaking from an impact.
- Helion offers specific coatings for machining different materials: Racer, Tin Up, Drillant, BLACK HVA, Rainbow, special DSC for 45 tap series, Deep Blue, Speed plus...

Application of helion tools coatings

Improve the strength and durability of your cutting tools.

The developed layers have excellent wear and friction resistance properties due to their high density and nano-structured growth. The absence of microdrops ensures a very fine surface and absolute homogeneity in the coating.

COATINGS TABLE

Coating	Hardness (HV)	Friction coefficient	Thickness (µm)	Oxidation resistance ºC	Coating Material Basis
Racer	3500	0.5	3+ - 1	900ºC	TiAlN
Racer Plus	3500	0.4	3+ - 1	1000ºC	AlTiN NANO
Volcano	3400	0.4	3+ - 1	1100ºC	AlCrTiN
Volcano Plus	3700	0.3	4.5+ - 1	1200ºC	AlTiN
Volcano Gold	3700	0.3	4.5+ - 1	1200ºC	AlTiN / TiN Gold
Deep Blue	3600	0.5	3+ - 1	900ºC	AlTiN / TiSiN
Speed	2500	0.5	3+ - 1	700ºC	ZrN
Speed Zr	2900	0.6	2+ - 0.7	950ºC	AlTiN / ZrN
Drillant	3100	0.5	3.5+ - 0.8	790ºC	TiN - TiAlN
TiN UP	2400	0.3	3+ - 0.7	600ºC	TiN
DSC	3300	0.3	3+ - 0.6	1100ºC	AlTiN / CW2
Shark	3000	0.25	3+ - 0.7	750ºC	TiCN
Diamond	10000	-	4+ - 0.5	900ºC	Diamond
Bright	Without coating				
Black HVA	Coating technology: CVD Chemical Vapour Deposition				