

# CERTESS™ NITRO

## Ultra-hard mechanic layers

HEF Group is able, with the CERTESS™ NITRO range, to offer a complete range of ultra-hard coatings that can answer all your wear problems.

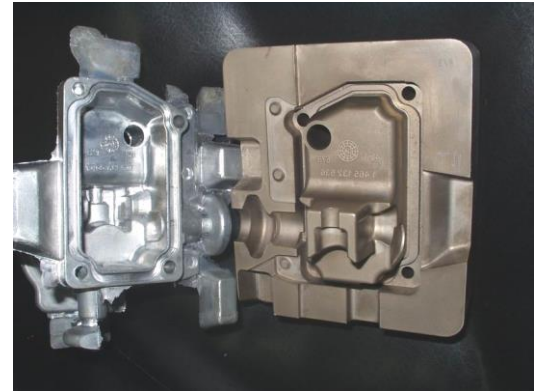


These treatments find their application especially in large fields and allow answering complex wear problems. Thus they make it possible fighting against:

- Abrasive wear
- Adhesive wear
- Erosion

They are applicable in various fields:

- The aerospace industry
- Automotive components
- Mechanic components used in machines and industrial equipment,
- Tooling applications (cutting, finishing, stamping ...),
- Molds for plastic and rubber industry,
- Under pressure injection,
- Medical tools and various decorative and optical applications.



## CERTESS™ NITRO

Coatings	Architecture	Thickness	Hardness*	Treatment temperature	Maximum use temperature	Applications
<b>Certess™ Ti</b>	Ti-N	Generally 2-6 µm, following the application	2700 HV	250 – 450 °C Depending on the substrate	500°C	Shaping tools Cutting tools Wear resistance of mechanical parts
<b>Certess™ X</b>	Cr-N		1500 – 2200 HV	150 – 350 °C Depending on the substrate	700°C	Wear and adhesion problems of plastic molds Wear resistance of mechanical parts Automotive parts
<b>Certess™ T</b>	Ti-Al-N		3000 HV	300 – 450 °C Depending on the substrate	800°C	Cutting tools Wear resistance at high temperature of mechanical parts
<b>Certess™ SD</b>	Ti-B-N		>3500 HV	250 – 450 °C Depending on the substrate	700 – 800°C	Wear and adhesion problems of plastic molds Wear resistance of mechanical parts Wear and collage problems of molds under pressure of aluminum.

\*Depending on the test protocol

