

## **Futura Nano**

### TiAlN (Titanium Aluminium Nitride)

Futura Nano (TiAlN), produced in the INNOVA, is a great all round coating for both HSS and carbide tools, especially in applications where there is a high thermal load. TiAlN has a nanolayered structure which was engineered to give an optimum balance between hardness and internal stress. High internal compressive stresses help to reduce the propagation of cracks through a coating therefore delaying the onset of failure. TiAlN also has improved sliding properties.

#### **Applications and Benefits**

- Abrasive materials - cast iron and heat treated steel
- Difficult to machine materials, such as stainless steel
- Higher speeds and feeds
- Reduces or eliminates use of coolants

#### **Improved Performance with**

- Higher speed and feed machining
- Dry or MQL machining
- Machining of harder materials

<u>Colour</u>	Violet - Grey
<u>Coating Thickness</u>	4 $\mu\text{m}$
<u>Microhardness</u>	3300HV
<u>Thermal Stability</u>	up to 900°C
<u>Coeff. Friction vs Steel</u>	0.3 - 0.35

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Titanium Aluminium Nitride