

# SUPRAL

## TiAlCN multilayer coating – The high-performance TiAlCN-based coating

Developed for metal cutting tasks (milling, drilling, turning, etc.) under demanding operating conditions, where other coatings reach thermal and mechanical limits. However, SUPRAL also displays excellent properties when stamping steel sheets, for example.

Wherever greater coating thicknesses, low friction coefficients and high oxidation resistance with high hot hardness are demanded, the advantages of the SUPRAL are demonstrated.

### PRODUCT FEATURES

- » High oxidation resistance
- » Chemical resistance
- » Low thermal conductivity coefficient
- » Low friction coefficient
- » Higher cutting speeds
- » Longer service life
- » Improved surface quality
- » Dry machining
- » Reduction of cooling lubricant
- » High hot hardness

### APPLICATIONS

<b>Cutting</b>	Drilling of steel up to 45 HRC Hard metal, cermet and HSS tools Cast iron machining High-speed processes, semi-dry (MMS) or dry machining
<b>Punching</b>	Steel sheets

### COATING PROPERTIES

<b>Hardness</b>	3,500 ± 500 HV
<b>Max. application temperature</b>	800 °C / 1,470 °F
<b>Coefficient of friction against steel</b>	<0.5
<b>Coating thicknesses</b>	2 - 5 µm
<b>Colour</b>	black

