

DUMATIC

Titanium carbide – Highest levels of hardness and abrasion resistance for forming applications

The new DUMATIC coating is always produced as a duplex version, i.e. using a plasma diffusion process on the base material. The coating has a structured multilayer design with a high proportion of TiC.

The uppermost layer is designed as a low-friction and coloured cover layer.

PRODUCT FEATURES

- » The DUMATIC coating produced using the PVD process at approximately 450 °C is deposited without any tool distortion
- » Polished surfaces are thereby not roughened
- » The DUMATIC coating displays a very low tendency for cold welding with high alloy stainless steel qualities
- » Due to its relatively low oxidation resistance, DUMATIC is not suitable for higher contact temperatures which can occur with semi-hot forming processes, for example

APPLICATIONS

Forming technology	Drawing, stamping, pressing and forming tools for the working of high-alloy chrome/nickel materials and similar requirements. Because of its high hardness, it is especially suitable for cold forming and the cutting of high-strength sheet metals and for cold forging processes with high contact pressures.
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COATING PROPERTIES

Hardness TiCN toplayer	3,700 ± 500 HV
Ø Hardness of layer composite*	2,600 ± 300 HV
Max. application temperature	400 °C / 750 °F
Coefficient of friction against steel	0.25
Coating thicknesses	3 - 5 µm
Colour	reddish/grey

* The hardness of a multilayer coating results from the mixed hardness of its components and can vary with the test load.

