eifeler

DUPLEX-CrCN

Increased load-carrying capacity and wear protection thanks to optimized Duplex technology.

The Duplex CrCN coating combines plasma-assisted nitriding with a subsequent PVD hard coating in a continuous vacuum process. This coordinated treatment significantly increases the tool's edge strength and load-bearing capacity and ensures optimal adhesion of the functional layer.

The nitrided surface layer provides strong support for the CrCN coating and reduces plastic deformation and wear while maintaining dimensional accuracy. CrCN offers high hardness, excellent adhesion, and resistance to corrosion and oxidation. Additionally, it features a low coefficient of friction and high hardness, making it ideal for tribologically demanding applications with insufficient lubrication.

Duplex CrCN is particularly suitable for forming, drawing, punching, and pressing tools that are exposed to high compressive loads, abrasive wear, and corrosive media, such as those used with aluminum, galvanized sheet metal, and non-ferrous metals.

ADVANTAGES

- High hardness and adhesion
- Excellent chemical resistance
- Low coefficient of friction against steel
- Low residual stress

COATING PROPERTIES

	Duplex-CrCN
Hardness	2,300 ± 200 HV
Coating thicknesses	2 – 6 µm
Maximum operating temperature	600 °C / 1,100 °F
Coefficient of friction against steel	0.2 – 0.3
Color	Silver gray
Coating composition	CrCN based

APPLICATIONS

Forming	Drawing, punching, pressing, and forming tools for machining aluminum, galvanized sheet metal, and non-ferrous metals

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ONE STEP AHEAD.