

## MpC\_1 (Multipurpose Coating)



### Applications:

**Copper-based alloys** (especially lead-free types like CuNiSi)

**Other non-ferrous metals** such as aluminium (Al), titanium (Ti), and nickel (Ni)

**Stainless and mild steels**

### Benefits:

**Extended tool life (factor 1.5–3)** due to high wear and abrasion resistance

**Significant cost savings (factor 1.5–2)** by reducing spare parts, repairs, maintenance, and machine downtime

**Multifunctional tool usage** enabled by targeted microalloying

**Proven application in profile punches** for electrical connectors

**Reduced cold welding and built-up edge formation** thanks to low friction coefficient and surface roughness

**Excellent sliding properties**

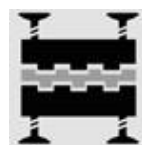
### Coating Properties

|                                             |                   |
|---------------------------------------------|-------------------|
| Coating Material                            | based on (Al,Cr)N |
| Microhardness                               | 30 GPa $\pm$ 2    |
| Maximum Operating Temperature               | >1.100 °C         |
| Coefficient of Friction against Steel (dry) | 0,2 - 0,3         |
| Coating Thickness at Cutting Edge           | 3 - 5 $\mu$ m     |
| Coating Architecture                        | Nanocrystalline   |

All specifications are subject to the respective testing and application conditions



Punching



Embossing



Forming