SteelCon®

CemeCon
The Tool Coating

“Bite Resistant” Even beyond 50 HRC SteelCon® – Hard Machining with the Right Coating

Machining, for example, injection molds made of hardened steels with more than 50 HRC is a demanding application: The materials are both hard and tough, and alloying components that increase corrosion resistance further complicate the machining tasks. Here, the milling cutters used literally “cut their teeth” due to enormous feed rates and high temperatures at cutting speeds of up to 250 m/min.

At the same time, the highest surface qualities are required even for the smallest mold contours. All this places special demands on the precision tools.

SteelCon® is a silicon-doped HiPIMS coating material developed by CemeCon specifically for machining hardened steels beyond 50 HRC. Whether dry or wet, milling, drilling, reaming or threading – SteelCon® is the ideal solution in hard machining thanks to its outstanding properties. The HiPIMS coating material is highly wear-resistant. It is characterized on the one hand by its high hardness and on the other hand by its toughness and remarkable adhesion. In addition to the dense layer structure, the silicon doping also ensures high thermal stability.

Top Conditions for Best Performance!

The wear behavior of SteelCon® differs significantly from other coatings available on the market. Tool manufacturers as well as users provide very positive feedback already a short time after the introduction of the product. Like any HiPIMS coating material, SteelCon® is droplet-free, making the coating extremely smooth. The surface qualities produced with SteelCon® are outstanding. As a consequence, subsequent work – in some cases even polishing of the workpieces – is no longer necessary.

SteelCon® ensures optimum chip and heat removal, which provides additional process stability.

The use of tools with a coordinated SteelCon® coating provides significant competitive benefits in the machining of hardened steels: shorter machining times, reduced set-up and handling procedures, high process stability and a proven higher quality of the machining results!

APPLICATION EXAMPLE: DIE AND MOLD MAKING

Material:
1.2379: 62 HRC

Tool:
Ball nose end mill, Ø 6 mm

v_c = **120 m/min**

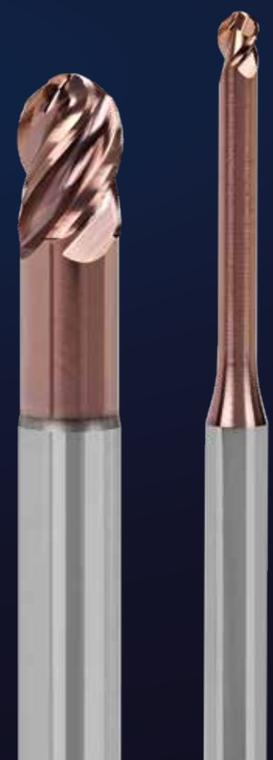
n = **6366 RPM**

f = **0.13 mm**

a_p = **0.1 mm**

a_e = **0.1 mm**

Cooling: **Air**



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Talk to an expert!

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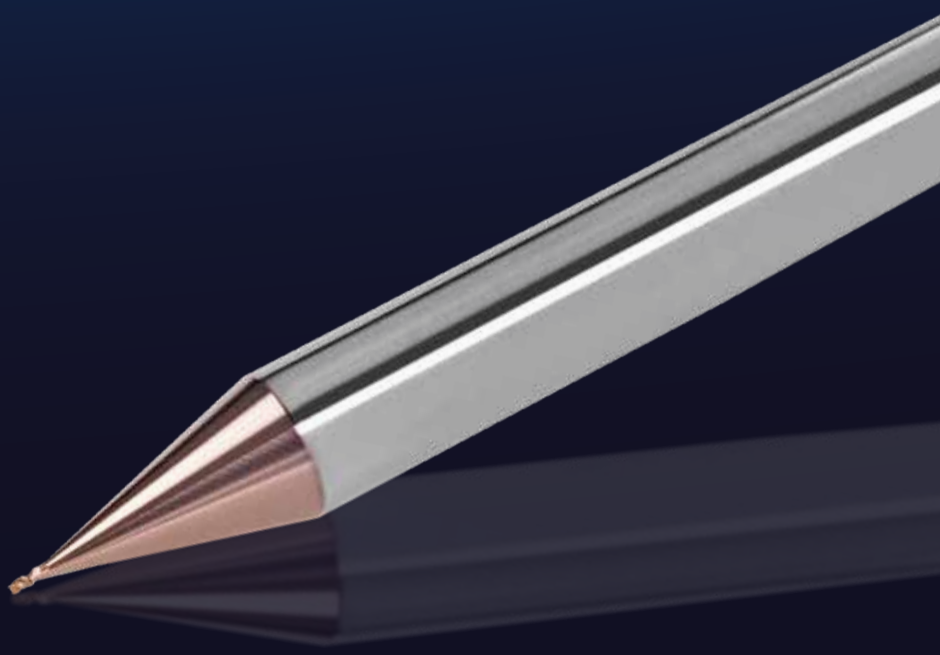

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