

CCDia®AeroSpeed

for CFRP, GFRP, Composites

The Premium Diamond Coating CCDia®AeroSpeed® was developed in order to achieve the highest surface qualities with the machining of fiber materials. The excellent adhesion combined with the unique smoothness guarantee productive drilling and milling of CFK, GFK and composites. Additionally, the very sharp cutting edge –CCDia®AeroSpeed® does not change the microgeometry of your precision tools – enables a better separation of the fibers. CCDia®AeroSpeed® is also suitable for solid carbide grades with increased cobalt content. The increased toughness of these grades in combination with a diamond coating enables process-safe drilling in aircraft construction.

Application example

Perfect surface quality throughout the entire tool life

Material: **CFRP, IMA-M21E**

Tool: **carbide countersink-drill**

d = **5.6 mm**

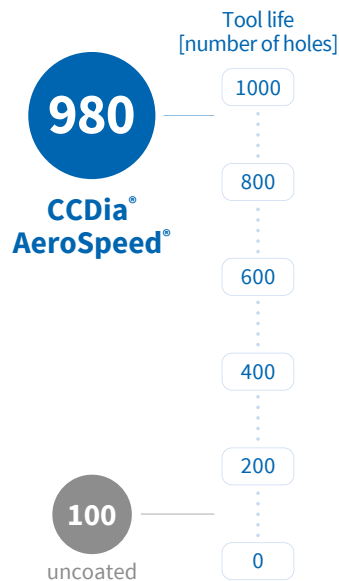
d_{countersink} = **12.5 mm**

f = **0.05 mm**

n = **6000 min⁻¹**

Tool life criterion:

wear transition radius countersink



Technical data

Coating technology:

Diamond

Microhardness:

10,000 HV_{0.05}

Composition of the coating material:

Multilayer, sp³

Color:

Grey-Shiny

Max. operating temperature:

650°C

Available coating thicknesses



Coating Thickness	✓	—
≈ 3 μm	✓	—
≈ 9 μm	✓	✓
≈ 14 μm	✓	✓

Appropriate hard metals

Talk to our experts to help you evaluate the appropriate hard metal to be coated with your CVD Diamond coating.

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