CCDia® AeroSpeed® for CFRP/GFRP/composites

Technical data

Coating technology: CVD Diamond

Microhardness: 10,000 HV0.05

Coating material: Multilayer, sp³

Color: Grey-Shiny

Max. operating temperature: 650 °C

Available coating thicknesses:

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Description</th>
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<tbody>
<tr>
<td>≈ 3 µm</td>
<td>–</td>
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<tr>
<td>≈ 9 µm</td>
<td>– –</td>
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<tr>
<td>≈ 14 µm</td>
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Perfect surface quality throughout the entire tool life

Tool life (number of holes)

Material: CFRP, IMA-M21E

Tool: Carbide countersink-drill

d = 5.6 mm

d_rectangle = 12.5 mm

f = 0.05 mm

n = 6000 min⁻¹

Tool life criterion: Wear transition radius countersink

The CCDia®AeroSpeed® premium diamond coating was developed in order to obtain the best possible surface quality when machining fiber materials. The excellent adhesion coupled with the unique smoothness guarantee highly reliably drilling and milling of CFRP, GFRP and composites. In addition, the very sharp edges – CCDia®AeroSpeed® does not change the microgeometry of your precision tools – are able to cut the fibers more effectively. CCDia®AeroSpeed® is also ideally suited to carbide grades with higher cobalt content. The increased ductility of these carbide grades in connection with a diamond coating allow a reliable drilling process in aircraft manufacturing.