ADDITIVE MANUFACTURING POWDER
M789 AMPO / FE-BASED ALLOYS

Available Product Variants

| 15 - 45 μm | 45 - 90 μm |

Product Description

BÖHLER M789 AMPO is a newly developed maraging steel, which combines the mechanical properties of 1.2709 with the corrosion resistance of 17-4PH. This patent bending grade can easily printed without any preheating and achieves a hardness of about 52 HRC with a very easy heat treatment. Furthermore, this material shows an excellent polishability, which makes it the ideal choice for inserts with conformal cooling in plastic injection molding and in any other application where a high hardness and corrosion resistance is of need.

Properties

- Toughness & Ductility: high
- Wear Resistance: good
- Machinability: very high
- Dimensional stability: very high
- Polishability: very high
- Corrosion resistance: very high
- Micro-cleanliness: very high

Applications

- 3D Printing - direct metal deposition
- Automotive Racing
- Components for Displays
- Lamps/Lenses for Automotive
- Plastic Extrusion
- Tool Holders (milling, drilling, turning & chucks)
- 3D Printing - selective laser melting
- Camera lenses
- Consumer Goods - General
- Mechanical Engineering / Machine Building General
- Powder for additive manufacturing
- Wind Power
- Automotive
- Civil and mechanical engineering
- Injection Molding
- Other Components
- Unknown Components Application
- Hotrunner systems

Technical data

<table>
<thead>
<tr>
<th>Material designation</th>
<th>BÖHLER patent (pending)</th>
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<td>Market grade</td>
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Chemical composition (wt. %)

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<tr>
<th>C</th>
<th>Cr</th>
<th>Mo</th>
<th>Ni</th>
<th>Ti</th>
<th>Al</th>
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<tr>
<td>&lt; 0,02</td>
<td>12.2</td>
<td>1</td>
<td>10</td>
<td>1</td>
<td>0.6</td>
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Heat Treatment for optimum properties:
Solution Annealing: 1000°C / 1h soaking time / air cooling to room temperature
Ageing: 500°C / 3h soaking time / air cooling

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