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|---|--|--|---|---|--|
| <p>E2<br/>E2 HIGH PRECISION<br/>TOOL MATERIAL</p> | <p><math>\lambda=35^{\circ}\text{-}38^{\circ}</math><br/><math>Y=10^{\circ}</math><br/>CUTTING ANGLES <math>\lambda 35^{\circ}\text{-}38^{\circ}</math>-<br/><math>38^{\circ}\text{ ? }10^{\circ}</math></p> | <p><math>\phi \leq 6</math> <math>\phi &gt; 6</math><br/>90° 45°<br/>CHAMFER <math>\phi &lt; 6</math> <math>\phi &gt; 6</math> 90°<br/>45°</p> | <p>DUAL DIRECTION<br/>HELICAL DRILL BIT</p> | <p>4xD<br/>4XD DRILLING DEPTH<br/>INDICATOR</p> | <p>EXTRA LONG PRECISION<br/>DRILL BITS</p> |
|---|--|--|---|---|--|

MATERIAL COMPATIBILITY

●●● Excellent (3/3) ●●○ Good (2/3) ●○○ Possible (1/3) ○○○ Not recommended

| MATERIAL  | SPECIFICATION                | GRP | 21345-10 |
|---|------------------------------|-----|----------|
| <b>Alloyed and non-alloyed steels</b><br>Non-alloyed steels | Rm < 450 N/mm <sup>2</sup>   | 1a  | ●○○      |
|   | Rm 450–700 N/mm <sup>2</sup> | 1b  | ○○○      |
|   | Rm 700–900 N/mm <sup>2</sup> | 1c  | ○○○      |
|   | Rm > 1200 N/mm <sup>2</sup>  | 1d  | ○○○      |
| <b>Stainless steels</b><br>Stainless steels                 | Rm < 650 N/mm <sup>2</sup>   | 2a  | ○○○      |
|   | Rm 650–950 N/mm <sup>2</sup> | 2b  | ○○○      |
|   | Rm > 950 N/mm <sup>2</sup>   | 2c  | ○○○      |
| <b>Hardened steels</b><br>Hardened steels                   | 44–56 HRC                    | 3a  | ○○○      |
|   | 57–67 HRC                    | 3b  | ○○○      |
| <b>Exotic materials</b><br>Special alloys                   | < 32 HRC                     | 4a  | ○○○      |
|   | > 32 HRC                     | 4b  | ○○○      |
| <b>Graphite</b><br>Industrial graphite                      |                              | 5   | ●○○      |
| <b>Cast iron</b><br>Grey / nodular cast iron                | < 32 HRC                     | 6a  | ○○○      |
|   | > 32 HRC                     | 6b  | ○○○      |
| <b>Titanium</b><br>Titanium alloys                          | Rm < 600 N/mm <sup>2</sup>   | 7a  | ○○○      |
|   | 600 < Rm N/mm <sup>2</sup>   | 7b  | ○○○      |
| <b>Nickel alloys</b><br>Inconel, Hastelloy                  | Rm < 1000 N/mm <sup>2</sup>  | 8a  | ○○○      |
|   | Rm > 1000 N/mm <sup>2</sup>  | 8b  | ○○○      |
| <b>Copper, brass, bronze</b><br>Copper-based                | Rm < 850 N/mm <sup>2</sup>   | 9a  | ●●●      |
|   | Rm > 850 N/mm <sup>2</sup>   | 9b  | ●●●      |
| <b>Aluminum</b><br>Aluminum alloys                          | Si < 0.5%                    | 10a | ●●○      |
|   | 0.5% < Si < 5%               | 10b | ●○○      |
|   | Si > 5%                      | 10c | ○○○      |
| <b>Synthetic materials</b><br>Engineering plastics          | Thermoplastic                | 11a | ●●○      |
|   | Thermoset                    | 11b | ●●○      |
| <b>Composite materials</b><br>Reinforced composites         | Glass fiber / GFK            | 12a | ●○○      |
|   | Carbon fiber / KFK           | 12b | ●○○      |
| <b>Precious metals</b><br>Gold, platinum, silver            | Gold                         | 13a | ●●○      |
|   | Platinum                     | 13b | ○○○      |

TECHNICAL DRAWING



DIMENSIONS

| NOMINAL DIMENSIONS |       |
|--------------------|-------|
| D (0 / -0.01)      | 10 mm |
| d (h5)             | 10 mm |
| L                  | 95 mm |
| l1                 | 45 mm |
| l3                 | –     |
| d3                 | –     |
| R                  | –     |
| e                  | –     |
| Z                  | 3     |
| Chamfer K          | 0.1   |
| w° collision       | –     |

