

E2

E2 HIGH PRECISION TOOL MATERIAL

$\lambda=20^\circ$

20° LAMBDA CUTTING ANGLE



V-GROOVE CHAMFER TOOL SHAPE

## MATERIAL COMPATIBILITY

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

| MATERIAL  | SPECIFICATION                | GRP | 48105-1 |
|---|------------------------------|-----|---------|
| <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) | 1 mm   |
| d (h5)        | 3 mm   |
| L             | 38 mm  |
| l1            | 1.6 mm |
| l3            | –      |
| d3            | –      |
| R             | –      |
| e             | –      |
| Z             | 2      |
| Chamfer K     | –      |
| w° collision  | 9.9°   |

