

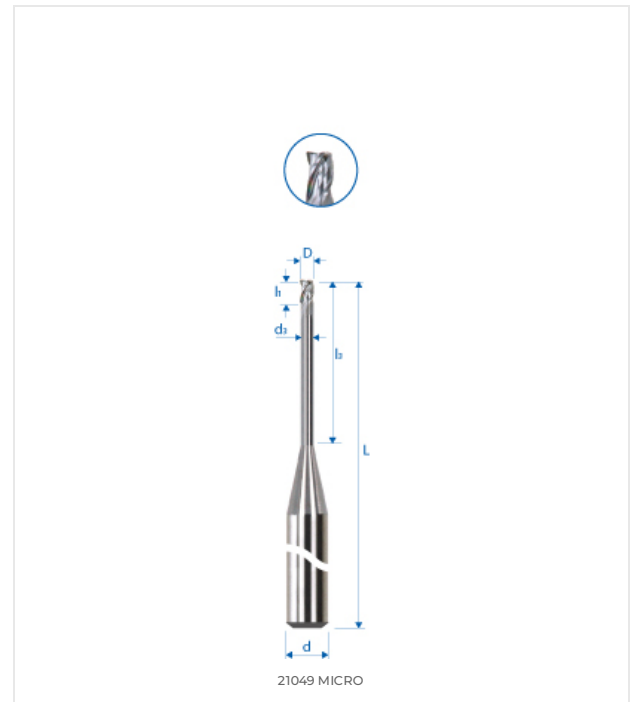
 CARBIDE TOOL MATERIAL E25 UF	 CUTTING ANGLES $\lambda=30^{\circ}\text{-}35^{\circ}$ $\gamma=8^{\circ}$	 45° CHAMFER D/40 PRECISION TOOL	 DUAL DIRECTION HELICAL DRILL BIT	 1.5xD DEPTH PRECISION TOOL	 EXTRA LONG PRECISION DRILL BITS	 ADJUSTABLE ANGLE ICON	 VARIABLE HELIX DRILL BIT
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MATERIAL COMPATIBILITY

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

MATERIAL	SPECIFICATION	GRP	21049A-1.5
Alloyed and non-alloyed steels <small>Non-alloyed steels</small>	Rm < 450 N/mm ²	1a	●●●
	Rm 450–700 N/mm ²	1b	●●●
	Rm 700–900 N/mm ²	1c	●●●
	Rm > 1200 N/mm ²	1d	●●●
Stainless steels <small>Stainless steels</small>	Rm < 650 N/mm ²	2a	●●●
	Rm 650–950 N/mm ²	2b	●●●
	Rm > 950 N/mm ²	2c	●●●
Hardened steels <small>Hardened steels</small>	44–56 HRC	3a	●●○
	57–67 HRC	3b	●●○
Exotic materials <small>Special alloys</small>	< 32 HRC	4a	●●○
	> 32 HRC	4b	●●○
Graphite <small>Industrial graphite</small>		5	●●○
Cast iron <small>Grey / nodular cast iron</small>	< 32 HRC	6a	●●●
	> 32 HRC	6b	●●●
Titanium <small>Titanium alloys</small>	Rm < 600 N/mm ²	7a	●●●
	600 < Rm N/mm ²	7b	●●●
Nickel alloys <small>Inconel, Hastelloy</small>	Rm < 1000 N/mm ²	8a	●●●
	Rm > 1000 N/mm ²	8b	●●●
Copper, brass, bronze <small>Copper-based</small>	Rm < 850 N/mm ²	9a	●○○
	Rm > 850 N/mm ²	9b	●○○
Aluminum <small>Aluminum alloys</small>	Si < 0.5%	10a	●○○
	0.5% < Si < 5%	10b	●○○
	Si > 5%	10c	●●○
Synthetic materials <small>Engineering plastics</small>	Thermoplastic	11a	○○○
	Thermoset	11b	○○○
Composite materials <small>Reinforced composites</small>	Glass fiber / GFK	12a	●○○
	Carbon fiber / KFK	12b	●○○
Precious metals <small>Gold, platinum, silver</small>	Gold	13a	●●○
	Platinum	13b	●○○

TECHNICAL DRAWING



DIMENSIONS

NOMINAL DIMENSIONS	
D (0 / -0.01)	1.5 mm
d (h5)	3 mm
L	50 mm
l1	2.25 mm
l3	18 mm
d3	–
R	–
e	–
Z	3
Chamfer K	0.04
w° collision	2.1°

