

**Garant**
**Solid carbide HPC micro-drill, TiAlN, Ø DC +0.004: 2,49mm**

**Order data**

Order number	121220 2,49
GTIN	4045197353436
Item class	11E

**Description**
**Version:**

High performance miniature drill **with extra long flutes.**

Shank Ø 3 h6 for shrink-fit chucks.

High concentricity, precision ground for **HPC applications in steel.**

**Note:**

Flute length  $L_c = L_2 + 1.5 \times D_c$ .

**Technical description**

Number of cutting edges Z	2
Feed f in steel < 1100 N/mm <sup>2</sup>	0.05 mm/rev.
Shank tolerance	h6
Nominal Ø D <sub>c</sub>	2.49 mm
Flute length L <sub>c</sub>	15 mm
Tolerance nominal Ø	0 / 0.004
Shank Ø D <sub>s</sub>	3 mm
Overall length L	46 mm
Standard	Manufacturer's standard
recommended maximum drilling depth L <sub>2</sub>	11.3 mm
Coating	TiAlN
Tool material	Solid carbide

Type	N
Point angle	130 degrees
Shank	Parallel shank to h6
Through-coolant	no
Machining strategy	HPC
Semi-Standard	yes
Colour ring	without
Type of product	Jobber drill

### User data

	Suitability	V <sub>c</sub>	ISO code
Alu plastics	suitable only under restricted conditions	200 m/min	N
Aluminium (short chipping)	suitable	140 m/min	N
Alu > 10% Si	suitable only under restricted conditions	140 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	70 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	70 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	70 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	55 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	35 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	25 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	35 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	30 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable	20 m/min	S
GG(G)	suitable	90 m/min	K
CuZn	suitable	140 m/min	N
Uni	suitable		

wet maximum	suitable
dry	suitable only under restricted conditions