

# Deep hole drilling in mould making material TOOLOX

Toolox is a quenched and tempered, prehardened tool and machine steel from Swedish Steel AB. Due to its high hardness (~45 HRC), toughness and form stability it is highly suitable for mould making.

The exceptional characteristics of the new material series "TOOLOX 33/44" demand special requirements for the deep hole drilling process.

We therefore recommend to use **special designed single flute gundrills** that have been developed in extensive series of tests to make drilling into this material **controllable and economic**.

## Single flute gundrill type 110

Special design  
Up to dia. 12,0 mm



## Deep hole drilling tool type 01

With indexable inserts and guide pads  
Special design  
From dia. 12,0 mm



### → Tool and process lay out for TOOLOX:

You provide us the drilling requirements. We will design the complete drilling process and accompany you from planning to the successful implementation. Contact us – we will be pleased to advise you.

botek**USA**  
200 Garden Avenue Roselle, IL 60172

**Phone** (630) 893-5300  
**Fax** (630) 893-5400  
**Email** info@botekUSA.com  
**www**.botekUSA.com



## Recommended cutting data for special designed single flute gundrills:

### TOOLOX 33

Drill-Ø	3	4	5	6	7-8	9-10	11-12	>12
Cutting speed (m/min.)	50	50	50	50	40-50	40-50	40-50	40-50
Feed rate (mm/rev.)	0.005	0.01	0.015	0.0175	0.02	0.03	0.04	0.1
Coolant pressure (bar)	100	100	100	90	80	70	60	40
Predrill-distance (mm)	40	40	50	60	60	70	70	70
Predrill feed rate (mm/rev.)	0.0025	0.005	0.0075	0.009	0.01	0.015	0.02	0.05

Possible tool life using neat cutting oil: approx. 10-12 meter under optimized process conditions



### TOOLOX 44

Drill-Ø	3	4	5	6	7	8	9-10	11-12	>12
Cutting speed (m/min.)	50	50	50	50	40-50	40-50	40-50	40-50	40-50
Feed rate (mm/rev.)	0.005	0.01	0.012	0.015	0.015	0.0175	0.02	0.03	0.07
Coolant pressure (bar)	100	100	100	90	90	80	70	60	40
Predrill-distance (mm)	40	40	50	50	60	60	70	70	70
Predrill feed rate (mm/rev.)	0.0025	0.005	0.006	0.0075	0.0075	0.009	0.01	0.015	0.035

Possible tool life using neat cutting oil: approx. 2-3 meter under optimized process conditions

#### Service:

##### → Regrinding and recoating

botek offers a prompt and cost effective in house regrinding and recoating service.

##### → Process layout

##### → Customer testing at our research and development department

Please contact us.

Further information to be found on [www.botek.de](http://www.botek.de)

# botek®

DEEP HOLE DRILLING SYSTEMS  
SOLID CARBIDE TOOLS

botekUSA

200 Garden Avenue  
Roselle, IL 60172

Phone (630) 893-5300

Fax (630) 893-5400

Email [info@botekUSA.com](mailto:info@botekUSA.com)

[www.botekUSA.com](http://www.botekUSA.com)