

## Toolox<sup>®</sup> 44 round bars

### General Product Description

Pre-hardened, precise, predictable steel, now in round bars.

Toolox<sup>®</sup> 44 round bars are pre-hardened, ready-to-use quenched and tempered tool steels that come in a range of diameters from small to large.

Suitable for engineering applications in tool holders and in different types of shafts and rolls, the diameter dimensions also provide a better solution for round parts in tooling applications like molding and in dies for aluminium die casting.

### Dimension Range

Toolox<sup>®</sup> 44 round bars are available in diameters 21 - 172 mm. Other dimensions can be available on request.

### Mechanical Properties

Diameter (mm)	Hardness (HBW)
21 - 172	410 - 475

Bar hardness is measured on a milled surface, with indents positioned as impact test according to EN 10 083.

### Impact Properties

Diameter (mm)	Min. Impact Energy for Charpy-V, longitudinal direction
21 - 141	18 J / 20°C
142 - 172	11 J / 20°C

Impact testing according to EN 10 083, EN ISO 148.

### Ultrasonic testing

Ultrasonic inspection is carried out according to EN 10 308 with extra demands according to specification SSAB V6.

## Tolerances

Tolerances for Toolox® 44 round bars are according to EN 10 060.

For more information concerning dimensions and tolerances, see Toolox® round bars dimensional program: Toolox® engineering & tool steel dimensional program bars or SSAB's brochure Toolox® Guarantees available at [www.toolox.com](http://www.toolox.com).

## Delivery Conditions

Quenched and Tempered at a minimum temperature of 590°C.

On delivery from SSAB the bars meet the following specifications:

- free from mill scale
- not repair welded

Delivery requirements can be found in SSAB's brochure Toolox® Guarantees or on [www.toolox.com](http://www.toolox.com)

## Fabrication and Other Recommendations

### **Welding, bending and machining**

For information concerning welding and fabrication, see SSAB's brochures at [www.toolox.com](http://www.toolox.com) or consult Tech Support, [techsupport@ssab.com](mailto:techsupport@ssab.com).

Toolox 44 is not intended for further heat treatment. If Toolox 44 is heated above 590°C after delivery from SSAB, no guarantees for the properties of the steel are given.

Nitriding or surface coating may be carried out if the temperature is below 590°C.

Appropriate health and safety precautions must be taken when welding, cutting, grinding or otherwise working on the product. Grinding, especially of primer-coated plates, may produce dust with high particle concentration.

## Contact Information

[www.ssab.com/contact](http://www.ssab.com/contact)