

Product information Toolox® 33



Guaranteed values

Hardness (Guarantee value)	HBW 280 - 330 (Corresponds to approx. 27 - 33 HRC)			
Impact toughness (Guarantee value)	<table border="1"> <tr> <td>Test temperature °C 20</td> <td>Impact energy, Charpy V test for plate, longitudinal; min J ≤ 130 mm 27</td> <td>Impact energy, Charpy V test for forged bar, thickness direction; min J > 130 mm 14</td> </tr> </table>	Test temperature °C 20	Impact energy, Charpy V test for plate, longitudinal; min J ≤ 130 mm 27	Impact energy, Charpy V test for forged bar, thickness direction; min J > 130 mm 14
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Milling (Guarantee value)	At a cutting speed of 300 m/min, feed 0,15 mm and 10 min effective machining time using Sandvik Coromill 200 and inserts GC 1025, we guarantee maximum edge wear of 0,3 mm.			
Ultrasonic testing (Guarantee value)	Discontinuities that give echoes corresponding to 1,5 mm or greater flat bottom holes are reported according to SSAB Standard V6.			
Etching (Guarantee value)	TOOLOX 33 fulfils the etching requirements of NADCA 207-2003.			
Dimensions Preliminary	TOOLOX 33 is supplied as plate in thicknesses between 5 - 130 mm, or as forged bars in thicknesses between 150 - 300 mm.			
Delivery condition	Quenched and tempered at a minimum of 590°C			
Heat treatment	TOOLOX 33 is not intended for further heat treatment. If TOOLOX 33 is exposed to heat treatment in excess of 590°C after delivery from SSAB Oxelösund AB no guarantees for the properties of the steel can be given. Nitriding or surface coating may be carried out if the temperature is below 590°C.			
Testing	Testing according to EN 10 137 - 1, 10 137-2 and EN ISO 6506-1. Hardness is measured on a milled surface 0,5-2 mm below the original surface.			
Tolerances	Plate; According to EN 10 029 - thickness tolerance according to Class C. - flatness tolerance according to Class N, steel type L.			
Tolerances	Forged; According to EN 10 031 Fulfils the basic requirements but also the following additional requirements made by SSAB Oxelösund AB: - camber better than 2 mm/m. - no greater deviation in camber than 5 mm on supplied bar lengths.			
Surface finish	Plate; According to EN 10 163 - 2 - surface requirements according to Class B. - repair requirements according to Sub-class 3.			