

Steel grade

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| Material No. / Werkstoff-Nr. | PREMIUM Toolox 33 |
| Description | Toolox 33 |
| BS | Toolox 33 |
| AISI/SAE | Toolox 33 |
| Search for alternatives in the ABRAMS STEEL GUIDE® | www.steel-guide.co.uk/alternatives/T33 |

Specifications



€co-Präz® [€co]
L: 500 mm

Chemical composition BS Toolox 33 (reference value %)

| C | Si | Mn | P | S | Cr | Mo | Ni | V |
|-------------|-----------|-----------|----------|-----------|-----------|-----------|---------|------------|
| 0.22 - 0.24 | 0.6 - 1.1 | 0.8 - 0.8 | 0 - 0.01 | 0 - 0.003 | 1.0 - 1.2 | 0.3 - 0.3 | 0 - 1.0 | 0.1 - 0.11 |

Physical properties

| | | | | |
|--|--------------------------------|-------|-------|-------|
| Hardness (delivery condition) | max. 330 HB, tempered | | | |
| Tensile strength R_m (as received condition) | approx. 1125 N/mm ² | | | |
| Working hardness | max. 36 HRC | | | |
| Thermal expansion coefficient $10^{-6}m/(m \cdot K)$ | 20 - 200°C | | | |
| | 13.1 | | | |
| Thermal conductivity $W/(m \cdot K)$ | 20°C | 200°C | 400°C | 600°C |
| | 35.0 | 35.0 | 30.0 | 23.0 |

Technical properties

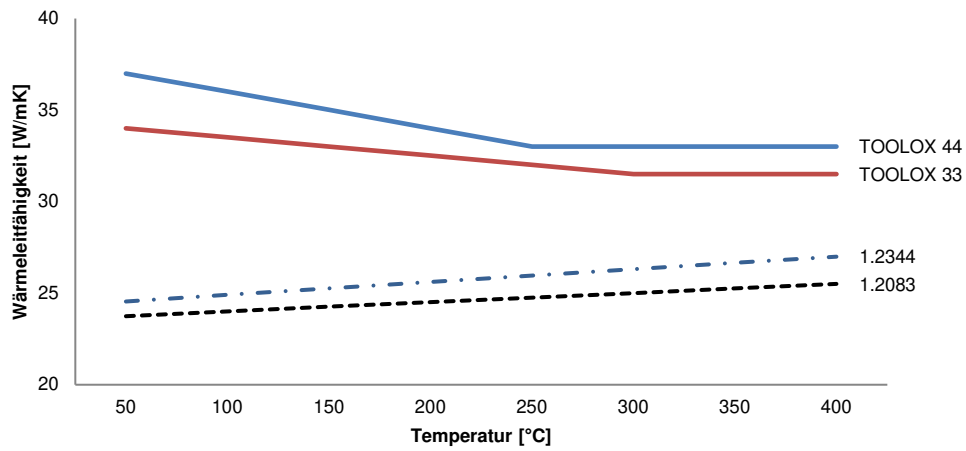
Quenched and tempered low-alloyed steel good machinability, high toughness and low residual stresses. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapour Deposition). Further heat treatment is not intended.

Applications

Mechanical engineering, machine parts, guide rails, base plates, assembling parts, press brake tools, plate forming tools, wear parts, plastic moulds, moulding frames, forming tools, rubber moulds, die casting moulds.



Thermal conductivity



Surface Treatment - hardness / charpy impact energy

