

Steel grade

Material No.	PREMIUM Toolox 33
AISI	Toolox 33
Search for alternatives in the ABRAMS STEEL GUIDE	www.abrams-steelguide.com/alternatives/T33

Shapes



**Smart Flat Stock [Smart]
Standardized Precision Blanks**
L: 12"
L: 24"



**Smart Flat Stock Metric [Smart]
Standardized Precision Blanks Metric**
L: 300 mm
L: 600 mm

Chemical composition AISI 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. 163.1 KSI			
Working hardness	max. 36 HRC			
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	68 - 392°F			
	13.1			
Thermal conductivity $W/(m \cdot K)$	68°F	392°F	572°F	1112°F
	35.0	35.0	30.0	23.0

Technical properties

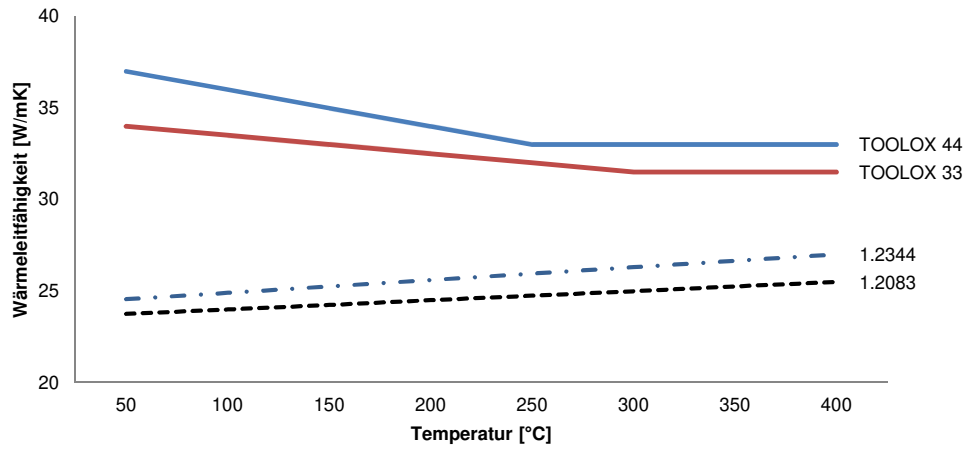
Quenched and tempered low alloyed toolsteel with good machinability, high toughness and low residual stresses. Can easily be polished, grained, eroded, etched, sliced, welded, nitrided, and coated with PVD (Physical Vapour Deposition). Further heat treatment is not intended.

Applications

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



Thermal conductivity



Surface Treatment - hardness / Charpy impact energy

