

Verwendete Titanlegierungen – WSD GmbH

	BT 1-00 (Grade 1)	BT 1-0 (Grade 2)	BT 16 (~Grade 5)
Chemical composition:			
1. Basis	titanium	titanium	titanium
2. Main elements: (max.-values)	0,05% C; 0,2% Fe; 0,08% Si; 0,05% O2; 0,04% N2; 0,008% H2	0,10% C; 0,3% Fe; 0,25% O2; 0,03% N2; 0,0125% H2; 0,3 Al	0,10% C; 0,25% Fe; 0,15% O2; 0,05% N2; 0,015% H2; 3,8% Al 0,15% Si 5,0% V; 5,5% Mo; 0,3% Zr
Mechanical properties:			
1. Tensile properties			
Ultimate strength	350 N/mm ²	350 N/mm ²	min 967 N/mm ² (for M7-threads)
Yield strength	280 N/mm ²	280 N/mm ²	min 800 N/mm ² (for M7-threads)
Elongation	25%	25%	15-20%
Reduction in Area	55%	55%	Ca. 65%
2. Charpy V-Notch Impact	33-54 J	33-54 J	144 J
3. Hardness HRC	HRB ca. 80	HRB ca. 80	HRC ca. 36
Physical properties:			
1. Density	4,6 g/cm ³	4,6 g/cm ³	4,6 g/cm ³
2. Melting point	1648°C	1648°C	1704°C
3. Modules of Elasticity	1042254 N/mm ²	1042254 N/mm ²	1126760 N/mm ²