

Material data sheet stainless steel 1.4404 – SCHUNK eGRIP

Information:

- Layer-thickness variant 1: 0,03 mm
- Layer-thickness variant 2: 0,05 mm
- Tolerances variant 1: +- 0,1 mm
- Tolerances variant 2: +- 0,2 mm
- Surface roughness (according to construction): Rz 0,02mm – 0,04 mm
- Component density according to manufacturing process: >99,9%

Mechanical properties	Value	Unit
Tensile strength (Rm)		
→ xy-direction (horizontal)	695	[N/mm ²]
→ z-direction (vertical)	650	[N/mm ²]
Yield strength (Rp0,2%)		
→ xy-direction (horizontal)	560	[N/mm ²]
→ z-direction (vertical)	520	[N/mm ²]
Elongation at break (A5)		
→ xy-direction (horizontal)	34	[%]
→ z-direction (vertical)	40	[%]
E-module (E)	190	[kN/mm ²]
Notched bar impact work (Av)	48	[J]

Chemical composition	Component	Guideline [%]
	Ni	10,0 – 13,0
	Cr	16,5 – 18,5
	N	Max. 0,11
	Mo	2,0 – 2,5
	C	Max. 0,03
	Si	Max. 1,0
	Mn	Max 2,0
	P	Max. 0,045
	S	Max 0,03
	Fe	Rest

Physical properties	Size	Unit
Density	8,0	[g/cm ³]
Electrical resistance (at 20°C)	0,75	[Ωmm ² /m]
Thermal conductivity (at 20 °C)	15	[W/mK]
Middle thermal expansion coefficient	23	[10 ⁻⁶ /K]
Specific thermal capacity (at 20 °C)	500	[J/kgK]