

Table Mechanical and Physical Properties of GUM METAL Compared with Another Materials

	GUM METAL <cold-worked>	GUM METAL <heat-treated>	β -C Alloy	β rich Alloy	Ti (C.P.)	Ni-Ti KE-2(NT) Alloy	Mg Alloy AZ91 \doteq AZ31
Young 's Modulus (GPa)	Av.45 (30~60)	85~95	88	75	120	82	45
0.2% Proof Stress (MPa)	900~1,100	1,400~1,700	1,120	950	250	—	160
Tensile Strength (MPa)	1,000~1,200	1,500~1,800	1,270	1,050	450	1,046	240
Fracture Elongation (%)	10~15	3~8	4	10	>23	—	3
Reduction of Area (%)	60~80	30~50	30	50	>70	—	—
Elastic Elongation (%)	2.2~2.6	1.7~2.2	1.1	1.1	0.2	—	0.3
Density (g/cm ³)	5.6	5.6	4.8	4.6	4.5	6.5	1.8