

CP Ti - GRADE 4



CP Ti - Grade 4 is the strongest grade of commercially pure titanium available—lightweight with outstanding corrosion resistance and biocompatibility.

With the **highest allowable oxygen and iron contents**, CP Ti - Grade 4 combines the excellent resistance to corrosion and corrosion fatigue of titanium with the high strength that makes it a candidate to compete with steels and nickel alloys for many applications. It has a minimum yield strength of 480 MPa (70 ksi). CP Ti - Grade 4 is **well-suited for any application where strength and corrosion resistance are important**, including dental, orthopedic, and medical implants and devices; surgical tools; airframe and aircraft engine components, and marine and chemical processing machinery.



Similar alloys: CP Ti - Grades 1–3, Ti 6Al-4V, Ti 6Al-4V ELI

KEY FEATURES OF CP Ti - GRADE 4

- **Strength:** CP Ti - Grade 4's strength is on par with annealed stainless steels while offering lighter weight and superior corrosion resistance.
- **Corrosion resistance:** CP Ti - Grade 4's corrosion resistance is based on the presence of a stable, continuous, tightly adherent oxide layer that forms spontaneously upon exposure to oxygen. If damaged, it reforms readily in an oxygenated environment like the human body.
- **Biocompatibility:** Titanium is a medical workhorse alloy because of its excellent biocompatibility, and commercially pure titanium like CP Ti - Grade 4 promotes osteointegration.
- **Long-lasting performance:** CP Ti - Grade 4 exhibits modulus of elasticity close to human bone and therefore does not induce stress shielding. The alloy can also be treated with surface coatings to accelerate bone fracture healing.



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