



ALLOY-SEARCH

ALLOY-SEARCH DATASHEET

3.7165 – Ti-6Al-4V : Grade 23 – ELI

DESCRIPTION

3.7165 - Ti-6Al-4V Grade 23 ELI is a medical grade titanium very similar to Ti-6Al-4V Grade 5 / 3.7164 but with a lower oxygen content for increased stiffness, improved fracture toughness and enhanced mechanical properties.

APPLICABLE STANDARDS

UNS R56400 / R56401 / R56407
AMS 4911 / 4928 / 4930 / 4931 / 4965
ASTM B-265 / B-348 F-136 / F-1472
BS TA11 / TA12 / TA13 / TA56 / TA59
DIN 3.7164 – Ti-6Al-4V Grade 5
Other standards available upon request

CHEMICAL COMPOSITION*

Element	N	C	H	Fe	O	Al	V	Y	Ti
Min %	-	-	-	-	-	5.5	3.5	-	-
Max %	0.05	0.08	0.015	0.30	0.30	6.75	4.5	0.005	Balance

*Per ASTM F-1472 & AMS4928.

MECHANICAL PROPERTIES*

Property	Minimum
UTS	895 Mpa
Rp0.2	825 Mpa
Elongation % in 4D	10%
Reduction of Area %	25%
Elastic Module	114 Gpa
Hardness	331 HB
Charpy V-Notch Impact	24 J

*Per ASTM F-1472 & AMS4928.

TYPICAL PRODUCTS & USAGE

Bar
Sheet
Billet
Wire
Fasteners
Medical Implants
Aviation
Jet Engines

MATERIAL APPLICATION

3.7165 – Ti-6Al-4V is a titanium grade per ASTM B265 grade 23 (ELI) / ASTM F-1472 which is suitable for medical applications and biocompatible, including for example in implants, replacement joints or to repair broken bones.

3.7164 – Ti-6Al-4V is a very similar grade per ASTM B265 grade 5 / AMS 4928, the only difference being the maximum oxygen content. This alloy is commonly used for aerospace and industrial applications such as in commercial and military jet engines for aircrafts.

Titanium has excellent corrosion resistance properties, and due to its high tensile strength and low density modern engineers commonly prefer titanium over steel.

Your alloy, our search.

Alloy Search
www.alloy-search.com

CONTACT ALLOY-SEARCH