

Technical datasheet

Ti Grade 23 / Ti-6Al-4V ELI

A high purity grade of Ti-6Al-4V with lower content of the interstitial elements – ELI (Extra Low Interstitials) for improved ductility and toughness

Available products

Product form
Sheet/plate
Bar

Size range from
0.4 mm thickness
1.0 mm diameter

Size range to
38.1 mm thickness
100.0 mm diameter

Chemical composition (%)

Ti	Al	V	Fe	O	C
Balance	5.50-6.75	3.5-4.5	0.25 max	0.13 max	0.08 max

Major specifications

ASTM F136
ISO 5832-3

UNS R56407

Physical properties

Density 4.47 g/cm³
Melting point 1649°C

Beta transus temperature 977 ± 4 °C

Mechanical properties – typical room temperature properties (annealed)

Yield strength 828 MPa
Tensile strength 895 MPa
Elongation 10 %

Key attributes

Ti-6Al-4V ELI (Extra Low Interstitial) is a high purity grade of Ti-6Al-4V with lower content of the interstitial elements oxygen, carbon and iron which results in a product with improved ductility and fracture toughness. This alloy has outstanding biocompatibility and is readily accepted in the human body due to its non-toxic and non-allergic elements. It is used widely in biomedical applications and as its low temperature ductility is improved (compared with Ti Grade 5/Ti-6Al-4V) it finds use in cryogenic applications.

Ti-6Al-4V ELI is highly fabricable and readily formed. It is machinable and can be welded by conventional processes and procedures. Please contact us for further details on forming, fabrication and welding consumables

Applications

Orthopedic implants
Surgical instruments
Medical devices
Cryogenic applications
Some aerospace components

Do you require further information or a quotation?

Please contact us...

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