S+D METALS

A BIBUS GROUP COMPANY

Technical datasheet

Ti-6Al4V-ELI | ASTM F136

Major specifications

UNS R56401	Titan Grade 23	ISO 5832-3

Available product forms

Round bars.
The current stock range can be found on www.sd-metals.com.
Further dimensions available upon request.
Use our Service Centre to have the available sizes cut to your desired dimensions.

Key features

Ti-6Al4V-ELI (Extra Low Interstitial) is suitable for use in the biomedical and medical fields as well as for a wide range of industrial applications. In this alloy, the interstitial elements such as oxygen, carbon, and iron are deliberately kept low. Ti 6Al4V-ELI thus exhibits improved fracture toughness and ductility. Ductility (elasticity, formability) improves at low temperatures, which is why Ti-6Al4V-ELI is also used in cryogenic applications (cooling and freezing applications).

Applications

- orthopedic implants
- surgical instruments
- bone screws and plates
- medical devices
- cryogenic applications
- some components used in aviation and aerospace technology

Chemical properties

Composition - limits in %

Al	V	Fe	O	C	Ti
5,50 - 6,50	3,5 - 4,5	max. 0,25	max. 0,13	max. 0,08	Rest

Physical and thermal properties

Density	4,47 g/cm³
Melting temperature	1649 °C
Beta transus temperature	977 ± 4°C
Thermal conductivity at 20°C	6,6 W/m • °C

Mechanical properties (room temperature)

Yield strength	min. 828 MPa
Tensile strength	min. 895 MPa
Elongation	min. 10 %

All information is subject to change without notice.
The properties correspond to the material in the heading. They may vary for other specifications.
Please contact us for more details.

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