

MATERIAL GRADE

Ti-6Al-4V ELI (Grade 23)

PRIMARY STANDARD

ASTM F136 / ISO 5832-3

✓ MDR COMPLIANT

YIELD STRENGTH (RP0.2)

Higher yield strength prevents deformation in long-span bridges.

ASTM Standard Limit 795 MPa

ValidTi™ Typical 995 MPa

>> +25% STRENGTH MARGIN

CERAMIC COMPATIBILITY (CTE)

Optimized thermal expansion for zero-stress porcelain bonding.

SAFE ZONE

9.7

 10^{-6} K^{-1} (25-500°C)

✓ Optimized for VITA® / Ivoclar®

CHEMICAL COMPOSITION

Nitrogen (N) 0.010 %

Carbon (C) 0.010 %

Iron (Fe) 0.17 %

Oxygen (O) 0.12 %

BIO-SAFETY & DUCTILITY

Tensile Strength 1005 MPa

Elongation 16 %

Ion Release BIO 40.0 $\mu\text{g}/\text{cm}^2$ *ISO Limit: 200 $\mu\text{g}/\text{cm}^2$. ValidTi is 5x Purer.

ⓘ **MILLING ADVISORY:** Due to the high ductility (16%), this material behaves differently than standard Grade 5. **Coolant (Wet Milling) is mandatory** to prevent "galling". Please download the **Soft-Touch Strategy** for VHF/Roland machines at validti.com.

MANUFACTURING DECLARATION

Produced by Xi'an Sino Titanium Metals Co., Ltd. under ValidTi Quality Protocol V5.0.

Facility Credentials: ISO 13485 Certified (NQA) | FDA Reg: 3033849259 | Compliance Contact: info@sinoti.cn

LEGAL STATUS: This document summarizes **typical technical values**. For lot-specific certification (EN 10204-3.1), please refer to the shipment CoA. "ValidTi" is a trademark of Valid Medical Technology Ltd. Test data verified under ISO 17025.

