

1.4980 / Alloy 286 / UNS S66286

1.4980 / Böhler T200 / Alloy 286 / UNS S66286 – Precision ESR-Steel for Aerospace, Power Gen, Oil and Gas with Age-Hardenable Thermal Durability

Properties of 1.4980 / Böhler T200 / Alloy 286 / UNS S66286

Böhler T200 is an austenitic, precipitation-hardenable stainless steel with excellent high-temperature strength and outstanding corrosion resistance. It corresponds to material number 1.4980, is also known as Alloy 286, and complies with international standards such as EN X6NiCrTiMoVB25-15-2, UNS S66286, and VdTÜV WB 435/3.

Key Benefits:

- Excellent high-temperature strength up to approx. 704 °C
- Oxidation resistant up to 816 °C
- Precipitation hardenable through intermetallic phases (Al, Ti)
- Very good creep resistance at high temperatures
- Corrosion resistant in oxidizing and reducing environments
- Good weldability with appropriate pre- and post-treatment

Applications of 1.4980 / Böhler T200 / Alloy 286 / UNS S66286

Böhler T200 is preferred for demanding high-temperature applications, especially in:

- Gas turbines (blades, shafts, steam valves)
- Power generation (gas, steam, nuclear)
- Aerospace (Frame, components)
- Mechanical engineering (shafts, screws, bolts, nuts)
- Automotive engineering (turbochargers, piston rings, sensors)
- Piping and valve technology (flanges, fittings, pumps)
- Oil & gas (manifolds, valves, drilling tools and components)

Specification Overview

Material number	1.4980
Alloy	A286
EN designation	X6NiCrTiMoVB25-15-2
UNS	S66286
Böhler Grade	T200
ASTM	A453 Gr.660 (similar)
VdTÜV	WB 435/3
AMS	5731, 5732 (comparable)
ASME	Code Case 1592 (comparable)
Wire	AMS 5731 / AMS 5732 / DIN EN 10269

Physical Properties:

Material Density	7,95 g/cm ³
Thermal conductivity (20 °C)	13 W/(m K)
Electrical Resistivity	0,91 Ω mm ² /m
Coefficient of thermal expansion	16,5 10 ⁻⁶ m/(m K)
Permeability μ_r	1,007
Thermal Expansion (20–100 °C)	16.5 × 10 ⁻⁶ /K

Mechanical Properties:

In solution-annealed + precipitation-hardened condition:

Class A, B, C (ASTM A453)

Tensile Strength Rm	approx. 270 N/mm ² min. 895 MPa
Yield Strength Rp0.2	min. 585 MPa
Hardness (HBW)	ca. 248 – 341

Class D up to diameter 63.5 mm (ASTM A453)

Tensile Strength Rm	min. 895 MPa
Yield Strength Rp0.2	min. 725 MPa
Hardness (HBW)	ca. 248 – 321

Class D from diameter 63.5 mm (ASTM A453)

Tensile Strength Rm	min. 825 MPa
Yield Strength Rp0.2	min. 655 MPa
Hardness (HBW)	ca. 248-321

Typical Chemical Composition:

Element Content acc. to VdTÜV Werkstoffblatt 453

C	Si	Mn	P	S	Co	Cr	Mo
≤0,08	≤1,00	≤2,00	≤0,03	≤0,03	≤ 2.00	13,5–16,0	1,0–1,5
Ni	V	Ti	B	Al			
24,0–27,0	0,1–0,5	1,9–2,3	0,003–0,010	≤ 0.350			

Product Portfolio

Our company offers Alloy A-286 / UNS S66286 / 1.4980 in a wide range of forms and processing stages:

- Round bars (rolled or forged)
- Sheets and Plates – hot/cold rolled, solution annealed
- Wire
- Forgings
- Pre-material for further processing
- Machined components on request

All products are available in ESR quality (Electroslag Remelting process) and meet the highest standards of homogeneity and purity.

