SPECIALTY METALS

Common Name: Titanium Grade 12 — Ti-CODE 12™
Ti-0.3Mo-0.8Ni

UNS Number: R53400

General Information:

Titanium Alloy Grade 12 is lightly alloyed near-alpha alloy offering improved strength at elevated temperatures and optimum ASME Code design allowables. The material is readily weldable, and has superior crevice corrosion resistance. This material is very corrosion resistant in highly oxidizing and mildly reducing environments. The alloy is available as wire, plate, sheet, strip, forgings, bar, and billet.

Common Specifications:

Specification:	Product Form:
AMS 4902	
ASME B861 (Grade 12)*	Seamless Pipe
ASME B862 (Grade 12)*	Welded Pipe
ASME SB-381	Forgings
ASME SB-348	Bars and Billets
ASTM B265 (Grade 12)	Sheet, Strip, and Plate
ASTM B338	
ASTM B348 (Grade 12)	Bars and Billets
ASTM B337 (Grade 12)	Welded and Seamless Pipe
ASTM B381 (Grade 12)	Forgings
ASTM B861	
ASTM B862	
AWS A5.16 (ERTi-12)	Weld Wire

*replacing ASTM B337

Chemistry Requirements: % Maximum unless given as a range.

N	C	H	Fe	O	Mo	Ni	Residuals Each Max.	Residuals Max Total	Ti
0.03	0.08	0.015	0.30	0.25	0.2-0.4	0.6-0.9	0.1	0.4	Balance

Minimum Tensile Properties:

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA*
As specified (shape)	70 (483)	50 (345)	18	25

Typical Tensile Properties:

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA
As provided	88 (607)	67 (462)	22	-

Note: Typical properties are not to be utilized as a requirement, but are only listed for guidance. These properties may or may not be attainable in all circumstances.

** %Ra not required by all specification*

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