

ASTMB348-Gr41 (DAT57M, VLTi)

UNS No. R56461

*DAT is trademark or registered trademark of Daido Steel Co., Ltd..

“Vanadium-free” “High strength and low density”

α + β titanium alloy supporting the “SDGs”

Features

★Sustainability

- Free from one of rare metals, Vanadium.
- Utilizing much scrap and improving the recycling rate.

★Equivalent features to Ti-6Al-4V

- Mechanical properties are equivalent to Ti-6Al-4V.
- The density is lower than Ti-6Al-4V.
- The hot workability and machinability are same as Ti-6Al-4V.

★ASTM registered

- Gr41 is registered in ASTMB348/B348M-21 and UNS No.R56461.



Chemical composition

Grade (Alloy name)	Ti	Al	Fe	V	O	N	C	H	(mass%) Others	
									Each	Total
Gr41 (DAT57M)	Bal.	5.5/ 6.5	0.4/ 1.5	-	Max. 0.30	Max. 0.05	Max. 0.10	Max. 0.015	Max. 0.1	Max. 0.4
Gr5 (Ti-6Al-4V)	Bal.	5.5/ 6.75	Max 0.40	3.5/ 4.5	Max. 0.20	Max. 0.05	Max. 0.08	Max. 0.015	Max. 0.1	Max. 0.4

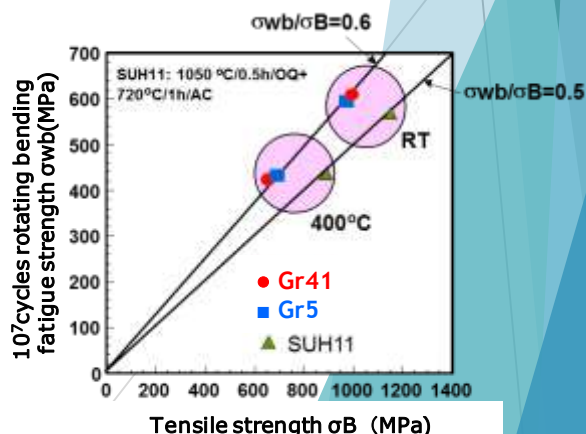
Physical properties

*Others : Other elements may not be added intentionally.

Grade (Alloy name)	Alloy type	Heat treatment	B - Transus(°C)	Density
Gr41 (DAT57M)	α + β	Annealing	1015	4.39
Gr5 (Ti-6Al-4V)	α + β	Annealing	985	4.43

Mechanical properties

Property	Gr41 (DAT57M)	Gr5 (Ti-6Al-4V)
Tensile Strength(MPa)	≥ 895	≥ 895
0.2% proof stress(MPa)	≥ 825	≥ 828
Elongation(4D)(%)	≥ 10	≥ 10
Reduction of area (%)	≥ 25	≥ 25



*These properties apply up to 90.6 mm in diameter, in case of round bars.