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Table of Mechanical Properties for (ASTM) - Titanium Plate & Sheet

| Grade | Tensile Strength, min | | Yield Strength, 0.2% Offset | | | | Elongation in 2 in. or 50 mm, min, % | Bend Test | |
|------------------|-----------------------|-----|-----------------------------|-----|-----|-----|---|---|--|
| | ksi | Mpa | min | | max | | | Under 0.070 in (1.8 mm) in Thickness | 0.070 to 0.187 in. (1.8 to 4.75 mm) in Thickness |
| | | | ksi | Mpa | ksi | Mpa | | | |
| 1 | 35 | 240 | 20 | 138 | 45 | 310 | 24 | 1.5T | 2T |
| 2 | 50 | 345 | 40 | 275 | 65 | 450 | 20 | 2T | 2.5T |
| 2H | 58 | 400 | 40 | 275 | 65 | 450 | 20 | 2T | 2T |
| 3 | 65 | 450 | 55 | 380 | 80 | 550 | 18 | 2T | 2.5T |
| 4 | 80 | 550 | 70 | 483 | 95 | 655 | 15 | 2.5T | 3T |
| 5 | 130 | 895 | 120 | 828 | ... | ... | 10 ^{vii} | 4.5T | 5T |
| 6 | 120 | 828 | 115 | 793 | ... | ... | 10 ^{vii} | 4T | 4.5T |
| 7 | 50 | 345 | 40 | 275 | 65 | 450 | 20 | 2T | 2.5T |
| 7H | 58 | 400 | 40 | 275 | 65 | 450 | 20 | 2T | 2T |
| 9 | 90 | 620 | 70 | 483 | ... | ... | 15 ^{viii} | 2.5T | 3T |
| 11 | 35 | 240 | 20 | 138 | 45 | 310 | 24 | 1.5T | 2T |
| 12 | 70 | 483 | 50 | 345 | ... | ... | 18 | 2T | 2.5T |
| 13 | 40 | 275 | 25 | 170 | ... | ... | 24 | 1.5T | 2T |
| 14 | 60 | 410 | 40 | 275 | ... | ... | 20 | 2T | 2.5T |
| 15 | 70 | 483 | 55 | 380 | ... | ... | 18 | 2T | 2.5T |
| 16 | 50 | 345 | 40 | 275 | 65 | 450 | 20 | 2T | 2.5T |
| 16H | 58 | 400 | 40 | 275 | 65 | 450 | 20 | 2T | 2T |
| 17 | 35 | 240 | 25 | 170 | 45 | 310 | 24 | 1.5T | 2T |
| 18 | 90 | 620 | 70 | 483 | ... | ... | 15 ^{viii} | 2.5T | 3T |
| 19 ⁱ | 115 | 793 | 110 | 759 | ... | ... | 15 | 3T | 3T |
| 20 ⁱ | 115 | 793 | 110 | 759 | ... | ... | 15 | 3T | 3T |
| 21 ⁱⁱ | 115 | 793 | 110 | 759 | ... | ... | 15 | 3T | 3T |
| 23 ⁱⁱ | 120 | 828 | 110 | 759 | ... | ... | 10 | 4.5T | 5T |
| 24 | 130 | 895 | 120 | 828 | ... | ... | 10 | 4.5T | 5T |
| 25 | 130 | 895 | 120 | 828 | ... | ... | 10 | 4.5T | 5T |
| 26 | 50 | 345 | 40 | 275 | 65 | 450 | 20 | 2T | 2.5T |
| 27 | 35 | 240 | 25 | 170 | 45 | 310 | 24 | 2T | 4T |
| 28 | 90 | 620 | 70 | 483 | ... | ... | 15 | 2.5T | 3T |
| 29 | 120 | 828 | 110 | 759 | ... | ... | 10 | 4.5T | 5T |
| 30 | 50 | 345 | 40 | 275 | 65 | 450 | 20 | 2T | 2.5T |
| 31 | 65 | 450 | 55 | 380 | 80 | 550 | 18 | 2T | 2.5T |
| 32 | 100 | 689 | 85 | 586 | ... | ... | 10 ^{vii} | 3.5T | 4.5T |
| 33 | 50 | 345 | 40 | 275 | 65 | 450 | 20 | 2T | 2.5T |
| 34 | 65 | 450 | 55 | 380 | 80 | 550 | 18 | 2T | 2.5T |
| 35 | 130 | 895 | 120 | 828 | ... | ... | 5 | 8T | 8T |
| 36 | 65 | 450 | 60 | 410 | 95 | 655 | 10 | 4.5T | 5T |
| 37 | 50 | 345 | 31 | 215 | 65 | 450 | 20 | 2T | 2.5T |
| 38 | 130 | 895 | 115 | 794 | ... | ... | 10 | 4T | 4.5T |

Above mechanical limits apply to tests taken both longitudinal and transverse to the direction of rolling. Mechanical properties for conditions other than annealed or plate thickness over 1 inch may be established by agreement between the manufacturer and the purchaser.

"T" equals the thickness of the bend test specimen. Bend tests are not applicable to material over 0.187 in (4.75 mm) in thickness.

ii) Properties for solution treated condition. Material is most often purchased and supplied in the solution treated condition. Aged material may be available, but is subject to negotiation between purchaser and supplier.

vii) Elongation for Grades 5, 6 and 32 on materials under 0.025 inch in thickness subject to negotiation manufacturer and purchaser.

viii) Elongation for continuous rolled and annealed (strip product from coil) for Grade 9 and Grade 18 shall be 12% minimum in the longitudinal direction and 8% minimum in the transverse direction.

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