

This page is mainly introduced the **Ti-3Al-2.5V Ti Alloy Datasheet**, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of **Ti-3Al-2.5V Ti Alloy**, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Ti Alloy Ti-3Al-2.5V Ti Alloy

Ti-3Al-2.5V Ti Alloy Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--------------|
|------|-----------------|--------------|

Ti-3Al-2.5V Ti Alloy Chemical composition (mass fraction) (wt.%)

| Chemical |    |    | Min.(%) |    |    |    | Max.(%) |    |       |  |
|----------|----|----|---------|----|----|----|---------|----|-------|--|
| C        | Si | Mn | P       | S  | Cr | Ni | Mo      | V  | Ta    |  |
|          |    |    |         |    |    |    |         |    |       |  |
| W        | N  | Cu | Co      | Pb | B  | Nb | Al      | Ti | Other |  |
|          |    |    |         |    |    |    |         |    |       |  |

|                     |  |
|---------------------|--|
| <b>Category</b>     | Titanium Alloy                                     |
| <b>Class</b>        | Wrought  |
| <b>Type</b>         | Alpha-beta alloy                                   |
| <b>Designations</b> | <b>United States:</b> AMS 4943, AMS 4944, AMS 4954 |
| <b>Composition</b>  |  |
| <b>Element</b>      | <b>Weight %</b>                                    |
| Al                  | 3  |
| V                   | 2.5  |

| <b>Mechanical Properties</b>                       |       |                   |                  |
|--|-------|-------------------|------------------|
| <b>Properties</b>                                  |       | <b>Conditions</b> |                  |
|  |       | <b>T (°C)</b>     | <b>Treatment</b> |
| <b>Density</b> ( $\times 1000$ kg/m <sup>3</sup> ) | 4.48  | 25                |                  |
| <b>Poisson's Ratio</b>                             | 0.33  | 25                |                  |
| <b>Elastic Modulus</b> (GPa)                       | 106.9 | 25                |                  |
| <b>Tensile Strength</b> (Mpa)                      | 689   | 25                | annealed         |
| <b>Yield Strength</b> (Mpa)                        | 586   |                   |                  |
| <b>Elongation</b> (%)                              | 20    |                   |                  |
| <b>Reduction in Area</b> (%)                       |       |                   |                  |

| <b>Thermal Properties</b>                       |     |                   |                  |
|---|-----|-------------------|------------------|
| <b>Properties</b>                               |     | <b>Conditions</b> |                  |
|   |     | <b>T (°C)</b>     | <b>Treatment</b> |
| <b>Thermal Expansion</b> (10 <sup>-6</sup> /°C) | 9.5 | 20-100 more       |                  |

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### Ti-3Al-2.5V Ti Alloy Physical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength   | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 65      | $\delta 5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | $Akv \geq$ /J            |
| HBS              | 123-321 | -                        |
| HRC              | 30      | -                        |

### Ti-3Al-2.5V Ti Alloy Mechanical Properties

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength   | 154     | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 56      | $\delta 5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | $Akv \geq$ /J            |
| HBS              | 235-268 | -                        |
| HRC              | 30      | -                        |

### Ti-3Al-2.5V Ti Alloy Heat Treatment Regime

| Annealing | Quenching | Tempering | Normalizing | Q & T |
|-----------|-----------|-----------|-------------|-------|
| √         | √         | √         | √           | √     |

### Ti-3Al-2.5V Ti Alloy Range of products

| Product type | Products | Dimension | Processes | Deliver Status |
|--------------|----------|-----------|-----------|----------------|
|              |          |           |           |                |

|                 |  |                            |   |   |
|-----------------|--|----------------------------|---|---|
| Plates / Sheets | Plates / Sheets                          | 0.08-200mm(T)*W*L          | Forging, hot rolling and cold rolling       | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar       | Round Bar, Flat Bar, Square Bar          | Φ8-1200mm*L                | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting,                          |
| Coil / Strip    | Steel Coil /Steel Strip                  | 0.03-16.0x1200mm           | Cold-Rolled & Hot-Rolled                    | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes   | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded           | Annealed, Solution and Aging, Q+T, ACID-WASHED                |

**We can produce Ti Alloy the specifications follows:**