Precipitation-Hardening Stainless and Heat-Resisting Steel Plate, Sheet, and Strip A 693 Type XM-12 steel chemical information,mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, We can produce round bars, forged rings, forged cakes, flat bars, tubes, sheets, plates, steel wires, steel strips, steel coils, etc. The size can be customized, the maximum order quantity is 100Kg. It also contains the use of **A 693 Type XM-12**,such as it is commonly used in bars, sheet,plates, steel coils, steel pipes,forged and other materials application.

Data Table for Materials Stainless Steels & Special Steels Precipitation-Hardening Stainless and Heat-Resisting Steel Plate, Sheet, and Strip A 693 Type XM-12

| A 693 Type XM-12 Standard Number | | |
|---|---|---|
| ITEM | Standard Number | Descriptions |
| 1 | A 693 (2006) | Precipitation-Hardening Stainless and Heat-Resisting Steel Plate, Sheet, and Strip |

| A 693 Type XM-12 Chemical composition(mass fraction)(wt.%) | | |
|---|---|---|
| Chemical | Min.(%) | Max.(%) |
| C | | 0.07 |
| Mn | | 1.00 |
| Si | | 1.00 |
| P | | 0.04 |
| S | | 0.03 |
| Cr | 14.00 | 15.50 |
| Ni | 3.50 | 5.50 |
| Mo | | |
| Cu | 2.50 | 4.50 |
| Nb | 0.15 | 0.45 |

| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |

| A 693 Type XM-12 Physical Properties | | |
|---|---|---|
| Tensile strength | 115-234 | σb/MPa |
| Yield Strength | 23 | σ 0.2 ≥/MPa |
| Elongation | 65 | δ5≥ (%) |
| ψ | - | ψ≥ (%) |
| Akv | - | Akv≥/J |
| HBS | 123-321 | - |
| HRC | 30 | - |

| A 693 Type XM-12 Mechanical Properties | | |
|---|---|---|
| Tensile strength | 231-231 | σb/MPa |
| Yield Strength | 154 | σ 0.2 ≥/MPa |
| Elongation | 56 | δ5≥(%) |
| ψ | - | ψ≥(%) |
| Akv | - | Akv≥/J |
| HBS | 235-268 | - |
| HRC | 30 | - |

| A 693 Type XM-12 Heat Treatment Regime | | | | |
|---|---|---|---|---|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| A 693 Type XM-12 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 Stainless Steels & Special Steels the specifications follows:

Note:
(1) listed in the table apex diameter (d), to steel thickness (a) multiples said.
(2) in the ASTM A6 standard specified scope can meet any additional conditions.
(3) from the standard for 50 mm (2 in).
Mechanical properties
Mechanische Eigenschaften
Caracteristiques mecaniques
ReH Minimum yield strength / Mindestwert der oberen Streckgrenze / Limite d’elasticite minimale
Rm Tensile strength / Zugfestigkeit / Resistance a la traction
A Minimum elongation / Mindestwert der Bruchdehnung / Allongement minimal
J Notch impact test / Kerbschlagbiegeversuch / Essai de flexion par choc

Round bar:
Diameter : 1mm-2000mm
Square bar:
Size:  50mm * 50mm-600mm *600mm
Plate steel/flat bar:
Size: Thickness:  0.1mm-800mm Width: 10mm to 1500mm
Tube/pipe:
Size: OD:  6-219mm  WT: 1-35 mm.
Cold-rolled sheet: Thickness:  2-5mm Width:1000mm Length: 2000mm
Hot-rolled sheet: Thickness:6-80mm Width: 210-610mm
Length:  We can supply any length based on the customer's requirement.
Forging/hot rolling/ extrusion of steel.
Forging: Shafts with flanks/pipes/tubes/slugs/donuts/cubes/other shapes
Finished goods condition:  hot forging/hot rolling + annealing/normalizing + tempering/quenching + tempering/any conditions based on the customer's requirement

Surface conditions:  scaled (hot working finish)/ground/rough machining/fine machining/based on the customer's requirement
Furnaces for metallurgical processing:  electrode arc + LF/VD/VOD/ESR/Vacuum consumable electrode.
Ultrasonic inspection:  100% ultrasonic inspection for any inperfections or based on the customer's requirement.
UTS according to SEP 1921 C/c,D/d,E/e;A388 or GB/T 6402
Excellent service for all kinds of industries, with advantages of technologies,  equipment and price.
We serve you with our honesty,  integrity,  and professionality.