

This page is mainly introduced the 03X18H12 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 03X18H12, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Heat-Resistant Steel 03X18H12

03X18H12 Standard Number:

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

03X18H12 Chemical composition (mass fraction) (wt.%)

| Chemical | | | Min.(%) | | | | Max.(%) | | |
|----------|----------|----------|-----------|----------|-----------|-----------|----------|-----------|-------|
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| Max 0.03 | Max 0.40 | Max 0.40 | Max 0.030 | Max 0.02 | 17.0-19.0 | 11.5-13.0 | Max 0.30 | | |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| Max 0.20 | | | | | | | | Max 0.005 | |

03X18H12

03X18H12 Physical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | σ_b /MPa |
| Yield Strength | 23 | $\sigma_{0.2} \geq$ /MPa |
| Elongation | 65 | $\delta_5 \geq$ (%) |
| ψ | - | $\psi \geq$ (%) |
| Akv | - | Akv \geq /J |
| HBS | 123-321 | - |
| HRC | 30 | - |

03X18H12 Mechanical Properties

| | | |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | σ_b /MPa |
| Yield Strength | 154 | $\sigma_{0.2} \geq$ /MPa |

| | | |
|------------|---------|----------------------|
| Elongation | 56 | $\delta 5 \geq (\%)$ |
| ψ | - | $\psi \geq (\%)$ |
| Akv | - | $Akv \geq /J$ |
| HBS | 235-268 | - |
| HRC | 30 | - |

03X18H12 Heat Treatment Regime

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

03X18H12 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 Heat-Resistant Steel the specifications follows: