

This page is mainly introduced the MP35N Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of MP35N, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Superalloys MP35N

| MP35N Standard Number: | | |
|------------------------|----------------------|---|
| ITEM | Standard Number | Descriptions |
| 1 | SAE AMS 5844H (2014) | Alloy, Corrosion-Resistant, Round Bars, 20Cr - 35Ni - 35Co - 10Mo Vacuum Induction Plus Consumable Electrode Vacuum Remelted Solution Heat Treated and Work Strengthened |
| 2 | SAE AMS 5845J (2014) | Alloy, Corrosion-Resistant, Round Bars, 20Cr - 35Ni - 35Co - 10Mo Vacuum Induction Plus Consumable Electrode Vacuum Remelted Solution Heat Treated, Work Strengthened, and Aged |
| 3 | SAE AMS 5758J (2014) | Alloy, Corrosion-Resistant, Bars, 20Cr - 35Ni - 35Co - 10Mo, Vacuum Induction Plus Consumable Electrode Vacuum Remelted, Solution Heat Treated for Work Strengthening |

| MP35N Chemical composition(mass fraction)(wt.%) | | | | | | | | | |
|---|----|---------|----|----|---------|----|----|----|-------|
| Chemical | | Min.(%) | | | Max.(%) | | | | |
| C | | | | | 0.025 | | | | |
| P | | | | | 0.015 | | | | |
| Si | | | | | 0.15 | | | | |
| Ni | | 33.00 | | | 37.00 | | | | |
| Co | | | | | Bal | | | | |
| Mn | | | | | 0.15 | | | | |
| S | | | | | 0.01 | | | | |
| Cr | | 19.00 | | | 21.00 | | | | |
| Mo | | 9.00 | | | 10.50 | | | | |
| Ti | | | | | 1.00 | | | | |
| Fe | | | | | 1.00 | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Alloy, Corrosion-Resistant, Round Bars, 20Cr - 35Ni - 35Co - 10Mo
Vacuum Induction Plus Consumable Electrode Vacuum Remelted
Solution Heat Treated and Work Strengthened

| MP35N 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 | - |

| MP35N 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 | - |

| MP35N Heat Treatment Regime | | | | |
|-----------------------------|-----------|-----------|-------------|-------|
| Annealing | Quenching | Tempering | Normalizing | Q & T |
| √ | √ | √ | √ | √ |

| MP35N 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 Superalloys the specifications follows: