

This page is mainly introduced the Z33C13 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of Z33C13, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel Z33C13

| Z33C13 Standard Number: | | |
|-------------------------|-----------------|---|
| ITEM | Standard Number | Descriptions |
| 1 | NF A 35-590 | Tool steels |
| 2 | NF A 35-573 | Stainless steels for general purposes. Plates, wide strips and strips |
| 3 | NF A 35-574 | Iron and steel. Stainless steel for general purposes. Semi-finished products, bars and wire rod |

| Z33C13 Chemical composition (mass fraction) (wt.%) | | | | | | | | | |
|--|----|---------|----|----|----|---------|----|----|-------|
| Chemical | | Min.(%) | | | | Max.(%) | | | |
| C | | 0.28 | | | | 0.38 | | | |
| Si | | | | | | 0.75 | | | |
| Mn | | | | | | 1.00 | | | |
| P | | | | | | 0.040 | | | |
| S | | | | | | 0.015 | | | |
| Cr | | 12.50 | | | | 14.00 | | | |
| Mo | | | | | | | | | |
| Ni | | | | | | | | | |
| C | Si | Mn | P | S | Cr | Ni | Mo | V | Ta |
| W | N | Cu | Co | Pb | B | Nb | Al | Ti | Other |
| | | | | | | | | | |

Iron and steel. Stainless steel for general purposes. Semi- finished products, bars and wire rod

Z33C13 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 | - |

Z33C13 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 | - |

Z33C13 Heat Treatment Regime

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

Z33C13 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, | $\Phi 8$ -1200mm*L | Forging, hot rolling and | Black, Rough Turning, |

| | | | | |
|---------------|--|----------------------------|-----------------------------------|---|
| | Square Bar | | cold rolling, Cast | 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 Specialsteel the specifications follows: