| | |
|---|---|
| **Quality** | **1.4105** |
| **According to Standard** | **EN 10088-1 : 2014** |
| **Number** | **1.4105** |

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| **Comparable Standards** | **German DIN** | **France AFNOR** | **Spain UNE** | **China GB** | **U.K. B.S.** | **Russia GOST** | **USA AISI - SAE** | **Japan JIS** |
|---|---|---|---|---|---|---|---|---|
| | X6CrMoS17 | | | | | | 430F | |

| **Chemical Analysis** | **C% max** | **Si% max** | **Mn% max** | **P% max** | **S% max** | **Cr% max** | **Mo% max** |
|---|---|---|---|---|---|---|---|
| | 0.08 | 1.5 | 1.50 | 0.04 | 0.15 - 0.35 | 16.0 - 18.0 | 0.20 - 0.60 |

**Hot Work and Heat Treatment Temperatures**

**Temperature °C**

| **Hot - Forming** | **Melting Range** | **Soft Annealing +A** | **Isothermal Annealing +I** | **Recrystallization +RA** | **Quenching & Tempering QT** | **Stress-relieving +SR** |
|---|---|---|---|---|---|---|
| 1150 - 815 | 1500 - 1490 | 850 - 750 air | not suitable | 790-710 cooling to 300 | not suitable | - |
| | | | | then air | | |

## Mechanical Properties at Room Temperature

**Minimum Yield Strength $R^{eH}$**
**Mpa**
**Nominal Thickness mm**

| | **≤ 16** | **> 16** | **> 40** | **> 63** | **> 80** | **> 100** | **> 150** | **> 200** |
|---|---|---|---|---|---|---|---|---|
| | | **≤ 40** | **≤ 63** | **≤ 80** | **≤ 100** | **≤ 150** | **≤ 200** | **≤ 250** |
| | 275 | 265 | 255 | 245 | 235 | 225 | 215 | 205 |

**Tensile Strength R**
**Mpa**
**Nominal Thickness mm**

| **< 3** | **> 3** | **> 100** | **> 150** |
|---|---|---|---|
| | **≤ 100** | **≤ 150** | **≤ 250** |
| 430 to 580 | 410 to 560 | 400 to 540 | 380 to 540 |

**Minimum percentage elongation after fracture %**

| | **L = 80 mm. Normal thickness mm** | | | | **L = 5.65 $\sqrt{S_o}$ Nominal thickness mm** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **≤ 1** | **> 1** | **> 1.5** | **> 2** | **> 2.5** | **> 3** | **> 40** | **> 63** | **> 100** | **> 150** |
| | | **≤ 1.5** | **≤ 2** | **≤ 2.5** | **< 3** | **≤ 40** | **≤ 63** | **≤ 100** | **≤ 150** | **≤ 250** |
| **l** | 15 | 16 | 17 | 18 | 19 | 23 | 22 | 21 | 19 | 18 |
| **t** | 13 | 14 | 15 | 16 | 17 | 21 | 20 | 19 | 19 | 18 |