

Material No.: Code:

1.2436 X210CrW12

DE - Brand:

CPW

Chemical composition

(Typical analysis in %)

| | | | | | | | |
|------|-------|------|--|--|--|--|--|
| C | Cr | W | | | | | |
| 2,10 | 12,00 | 0,80 | | | | | |

Steel properties

Ledeburitic 12% chrome steel, excellent wear resistance due to the high volume of hard carbides in the steel matrix, high surface hardness after heat treatment, medium toughness, dimensionally stable, high compressive strength, not secondary hardenable. Similar to AISI D6.

Applications

Cutting and drawing tools for high wear resistance, rolls with high dimensional stability, deep drawing tools, tools for wire, bar and tube production, cold shear blades for thin sheets.

Condition of delivery

Soft annealed to max. 250 HB

Physical properties

Thermal expansion coefficient

| | | | | |
|---|----------|----------|----------|----------|
| $\left[\frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$ | 20-100°C | 20-300°C | 20-500°C | 20-700°C |
| | 10,9 | 12,3 | 13,0 | 13,2 |

Thermal conductivity

| | | | |
|---|------|-------|-------|
| $\left[\frac{\text{W}}{\text{m} \cdot \text{K}} \right]$ | 20°C | 350°C | 700°C |
| | 16,7 | 20,5 | 24,2 |

Heat treatment

Soft annealing

| Temperature | Cooling | Hardness |
|-------------|---------|-------------|
| 800 - 840°C | furnace | max. 250 HB |

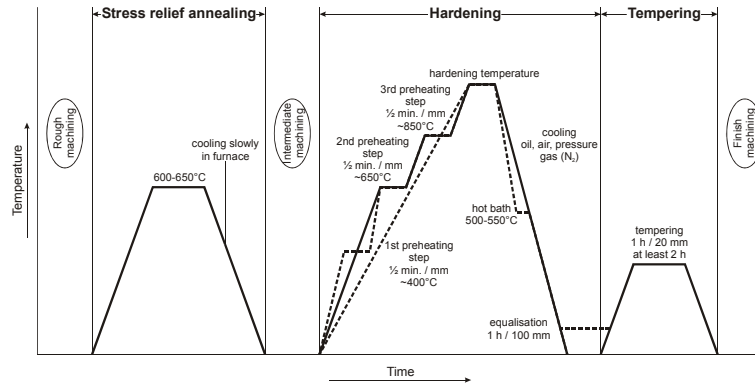
Stress relief annealing

| Temperature | Cooling | |
|-------------|---------|--|
| 600 - 650°C | furnace | |

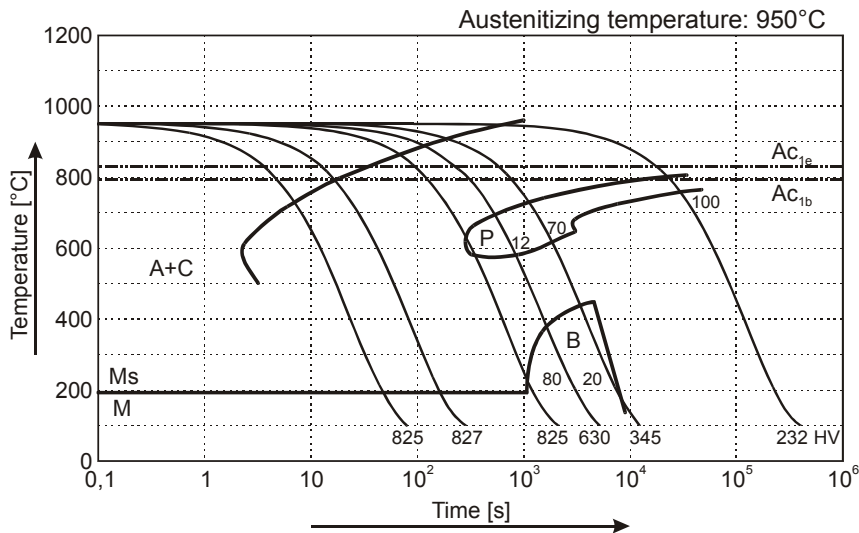
Hardening

| Temperature | Cooling | Tempering |
|-------------|--|--------------------------|
| 960 - 980°C | oil, pressure gas (N ₂), air or hot bath 500 - 550°C | see tempering diagram |

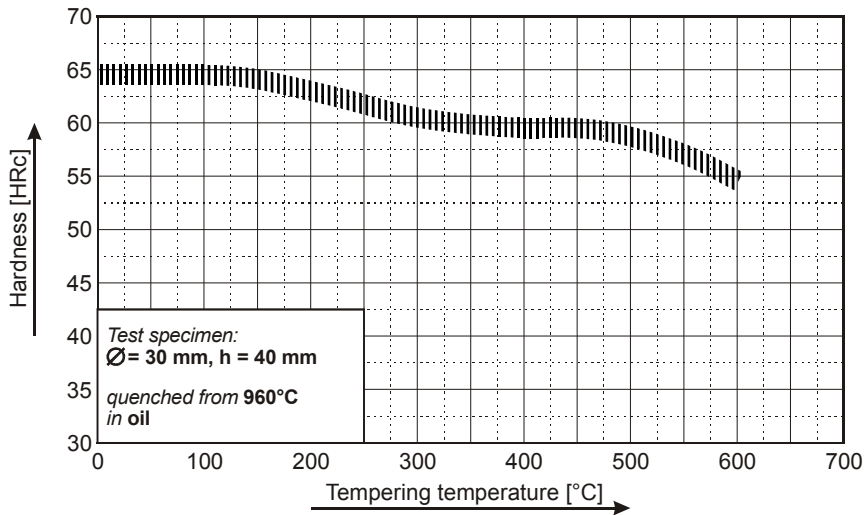
(1.2436) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.