

1.2436

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|-------------------------------|-------------|------|-----|--|--|
| Material no.: | 1.2436 | | | | |
| Abbreviated DIN name: | X210 CrW 12 | | | | |
| Chemical analysis (%): | C | Cr | W | | |
| | 2,1 | 12,0 | 0,7 | | |

| | |
|--------------------------------|---|
| HASCO colour code: | black / yellow |
| Flat steel: | green |
| Hardness when supplied: | annealed to max. 255 HB (~ 855 N/mm ²) |

Characteristics

Material properties:

Dimensionally stable 12% chrome steel with high wear resistance and good compressive strength plus adequate toughness.

Uses:

Cold work steel for the production of cutting, bending and embossing tools. Thermoforming and honing mandrels.

Thermal expansion coefficient

Thermal expansion coefficient
(10⁻⁶·m)/(m·K)

| | | | | | | | |
|------|------|------|------|------|------|------|----|
| 100 | 200 | 300 | 400 | 500 | 600 | 700 | °C |
| 10,9 | 11,9 | 12,3 | 12,6 | 12,9 | 13,0 | 13,2 | |

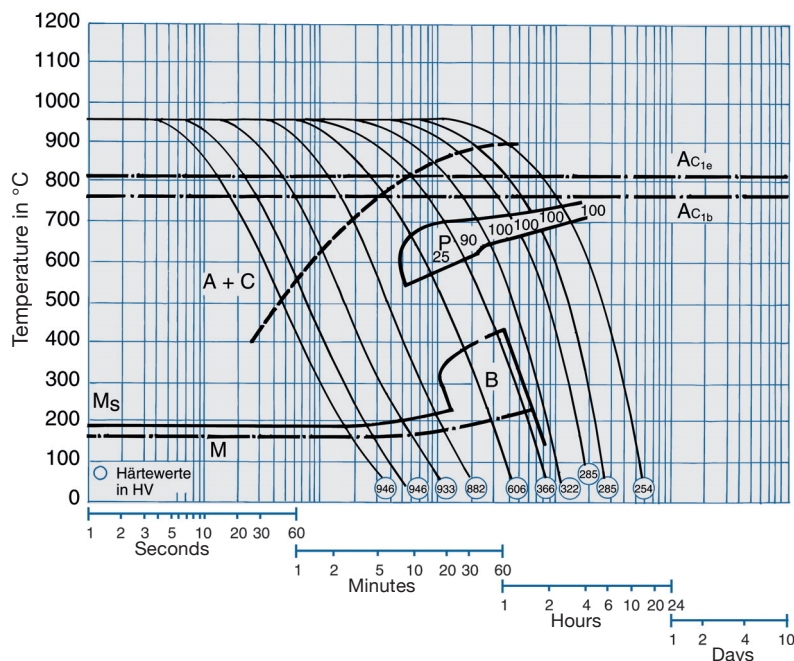
Thermal conductivity
W/(m·K)

| | | | |
|------|------|------|----|
| 20 | 350 | 700 | °C |
| 16,7 | 20,5 | 24,2 | |

Remarks

| | |
|---------------------------------|---|
| Polishing: | Not usual. |
| Graining: | Not usual. |
| Nitriding: | Not usual. |
| Hardening: | At 950°C – 980°C. Details can be taken from the time-temperature conversion and tempering charts. The most suitable heat treatment for the relevant workpiece should be fixed by the hardening shop. The hardness should be specified by the hardening shop and checked on delivery. |
| Soft annealing: | 800°C – 840°C, approx. 4 h |
| Stress-relief annealing: | To eliminate residual stress after coarse machining at approx. 600°C – 650°C, approx. 4 h with slow heating and furnace cooling. |
| Normal working hardness: | 59 - 63 HRC |

Time-temperature conversion chart



Tempering chart

