

**MATERIAL NO.:**

**1.2210**

**DESIGNATION:**

**DIN:** 115 CrV 3  
**AFNOR:** 100 C3  
**UNI:** 107 CrV 3 KU  
**AISI:** L2

**TECHNICAL TIP:**

» Silver steel 1.2210 is dispatched finish-ground to h9 tolerance.

**INDICATORY ANALYSIS:**

C 1.18  
 Si 0.25  
 Mn 0.30  
 Cr 0.70  
 V 0.10

**STRENGTH:**

max. 220 HB  
 (≈ max. 750 N/mm<sup>2</sup>)

**THERMAL CONDUCTIVITY AT 100°C:**

33  $\frac{W}{m K}$

**COEFFICIENT OF THERMAL EXPANSION  
 [10<sup>-6</sup>/K]**

100°C	200°C	300°C	400°C	500°C	600°C	700°C
11.8	12.5	12.9	13.5			

**CHARACTER:**

» Chrome-Vanadium alloyed **cold-work steel** with high resistance; also known as silver steel.

**APPLICATION:**

» Small turned parts, core pins, punches and engraving tools

**TREATMENT BY:**

» Polishing, etching, EDM, nitriding, hard chrome plating:  
 not usual

**HEAT TREATMENT:**

» Soft annealing:  
 710 to 740°C for about 2 to 5 hours  
 slow controlled cooling inside the furnace: 10 to 20°C per hour to about 600°C  
 further cooling in air, **max. 220 HB**

» Hardening:  
 780 to 840°C  
 keep curing temperature for 15 to 30 minutes  
 quenching in water/oil  
 obtainable hardness: **64–66 HRC**

» Tempering:  
 slow heating to tempering temperature immediately after hardening;  
 minimum time in furnace: 1 hour per 20 mm part thickness;  
 min. 2 hours/cooling in air

**TEMPERING CHART:**

