

# Material: 1.1730



**Material No.:** 1.1730

**Abbreviated DIN Name:** C 45 U

<b>Chemical Analysis (%):</b>	C	Si	Mn
	0,45	0,3	0,7

**Hardness:** annealed to max. 190 HB  
(~650 N/mm<sup>2</sup>)

## Characteristics

### **Material Properties:**

Unalloyed mould steel, readily machinable, surface hardened.

### **Uses:**

In mould and apparatus construction where unhardened parts are used e.g. mould frames and add-on parts.

This material is normally used in its supplied condition.

## Physical Properties

### **Thermal expansion coefficient**

(10<sup>-6</sup>·m) / (m·K)

100	200	300	400	500	600	700	°C
11,0	12,0	13,0	13,5	14,0	14,2		

Thermal conductivity

W / (m·K)	20	350	700	°C
	50			

For parts subjected to higher stresses, we recommend our case-hardening and heat-treatable steel type as well as our fully hardened steel.

## Remarks

**Polishing:** Not usual.

**Graining:** Not usual.

**Nitriding:** Not usual.

**Hardening:** Hardening is fundamentally not usual because the risk of stress cracking and hardness distortion can occur. Should a hardening treatment be necessary in exceptional cases, it is suggested that you consult with the heat treatment company for the most suitable process for the relevant workpiece.

**Soft annealing:** 680°C - 710°C, approx. 3 h

**Stress-relief annealing:** To eliminate residual stress after coarse machining at approx. 620°C, approx. 4 h with slow furnace cooling.

**Dimensions Available:** W x L : on request

H - : on request