

**C K W**

# D6

**COLD WORK TOOL STEEL**

**Nominal Chemical Analysis %**

<b>C</b>	<b>2.00</b>
<b>Cr</b>	<b>12.00</b>
<b>W</b>	<b>.70</b>

<b>Corresponding Specifications</b>	
<b>AISI</b>	<b>D6</b>
<b>BS EN ISO 4957:2000</b>	<b>X210CrW12</b>
<b>WKSTOFF</b>	<b>1.2436</b>

**Colour Code:** Blue/Silver

**Delivery Condition**  
Annealed 255 BHN Max

**Characteristics**  
D6 is a high carbon high chromium tool steel giving very high wear resistance and edge holding capability.

**Applications**  
D6 is suitable for a wide range of cold work applications: thread rolling tools, form rolls, press tools, blanking tools, deep drawing tools, slitting cutters, lamination tools, sand blasting nozzles.

**Heat Treatment**

**Annealing**

800 / 840°C for 4 hours approx.  
Cool slowly in the furnace at 20°C maximum per hour.

**Stress Relieving**

650 / 700°C for 2 hours approx.  
Cool in still air. Always stress relieve before hardening.

**Hardening**

**Pre-Heating**

- (i) 400°C Holding time at temperature:  
1 min / mm effective section approx.
- (ii) 650°C Holding time at temperature:  
30 sec / mm effective section approx.
- (iii) 850°C Holding time at temperature:  
30 sec / mm effective section approx.

**Austenitizing**

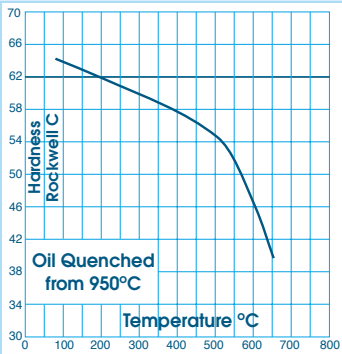
950/980°C Holding time at temperature:  
90 sec / mm effective section approx.

**Quenching:-**

- (i) Quench in Oil or,
- (ii) Quench in Air or,
- (iii) Quench into Neutral Salts (Martempering) at 250 / 500°C then cool slowly in still air

Temper immediately after quenching whilst tools are still hand warm.

**Tempering**



Consult the tempering diagram and temper according to requirements.

Temper for 1 hour / 25mm effective section for a minimum of 2 hours, then cool in still air.

For guidance, temper at:

- 150 / 200°C for maximum hardness
- 300 / 400°C for hardness with toughness
- 400 / 550°C for maximum toughness

Double tempering is recommended, cooling to room temperature between tempers.

NB. Lower hardness values will tend to result when hardening larger sections.