

<b>General Information</b>	Steel with hardening air, oil and salts bath. It features good resistance and toughness for hot and cold treatments. Normally used for mould carrier frames, containers for pressure casting, sub-dies for extrusion of aluminum, plastic moulds.							
<b>Comparable standards</b>	<b>AISI/SAE</b>	<b>DIN</b>	<b>W.N</b>	<b>AFNOR</b>	<b>BS</b>	<b>SIAU</b>		
	D2	X155CrVMo12-1	1.2379	Z160CDV12	BD2	KORV		
<b>Chemical analysis (%)</b>	<b>C</b>	<b>Mn</b>	<b>Si</b>	<b>Cr</b>	<b>Mo</b>	<b>V</b>	<b>P</b>	<b>S</b>
	1.50-1.60	0.15-0.45	0.10-0.40	11.0-12.0	0.60-0.80	0.90-1.10	≤0.03	≤0.03

### Heat Treatment

#### Isothermal annealing:

- Heat to 870±880°C;
- Furnace cooling to 760°C and hold at temperature for at least 10 hours;
- Cool by 10°C /h to 720°C;
- Cooling in air.

#### Stress relieving:

To be carried out after machining and before the final heat treatment.

- Heat to 650±700°C, hold for 4/6 hours;
- Furnace cooling to 330±350°C;
- Cooling in air.

#### Hardening:

- Initial preheating to 350±450°C;
- Second preheating to 750±850°C
- Austenitizing at 1010±1040°C or at 1080±1100°C;
- Cooling in air or in oil if large parts.

Quenched hardness: 62±66 HRC

#### Tempering:

In the temperature range 150±300°C with minimum holding time 3 h. For parts hardened at 1080±1100°C, a first tempering will be carried out at 500±550°C in order to exploit secondary hardness, followed by a second tempering at 180/300°C.

#### Tempering Curve (only for reference):

