

Material No.: Code:  
**1.3343 HS6-5-2C**

DE - Brand:  
**DMO5**

### Chemical composition

(Typical analysis in %)

| C    | Cr   | Mo   | V    | W    |  |  |  |
|------|------|------|------|------|--|--|--|
| 0,90 | 4,00 | 5,00 | 1,90 | 6,40 |  |  |  |

### Steel properties

High-speed steel, high strength at elevated temperatures, good toughness, high compressive strength, good wear resistance. Similar to AISI M2.

### Applications

Standard material for machining tools, e.g. drill bits, milling cutters, screw dies, broaches, inserts for circular saw blades. slotting tools and wood working tools. In addition cold forming tools e.g. cutting and blanking tools, cold extrusion punches and dies. Excellent base material for PVD/CVD coating.

### Condition of delivery

Soft annealed to max. 269 HB

### Physical properties

Thermal expansion coefficient

| $\left[ \frac{10^{-6} \cdot \text{m}}{\text{m} \cdot \text{K}} \right]$ | 20-100°C | 20-200°C | 20-300°C | 20-400°C |
|---|----------|----------|----------|----------|
|   | 10,8     | 11,8     | 12,0     | 12,5     |

Thermal conductivity

| $\left[ \frac{\text{W}}{\text{m} \cdot \text{K}} \right]$ | 20°C | 350°C | 700°C |
|---|------|-------|-------|
|   | 27,6 | 27,2  | 26,1  |

### Heat treatment

Soft annealing

| Temperature | Cooling | Hardness    |
|-------------|---------|-------------|
| 780 - 860°C | furnace | max. 269 HB |

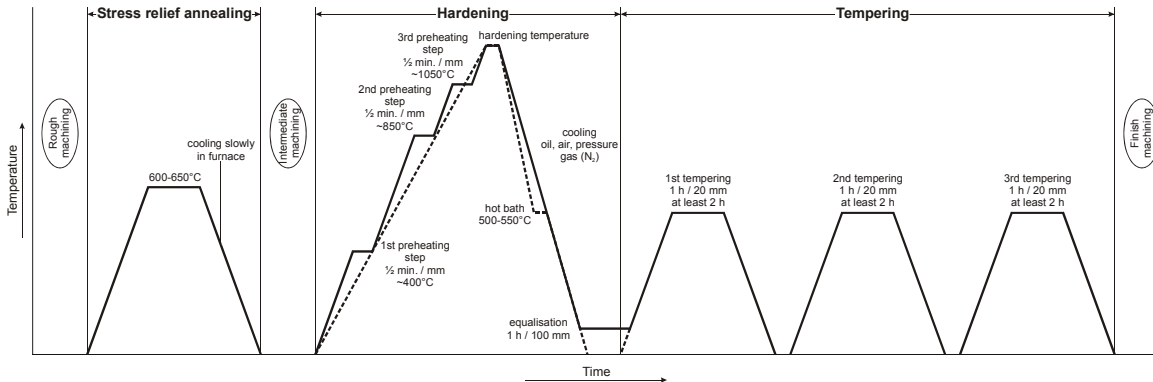
Stress relief annealing

| Temperature | Cooling |  |
|-------------|---------|--|
| 600 - 650°C | furnace |  |

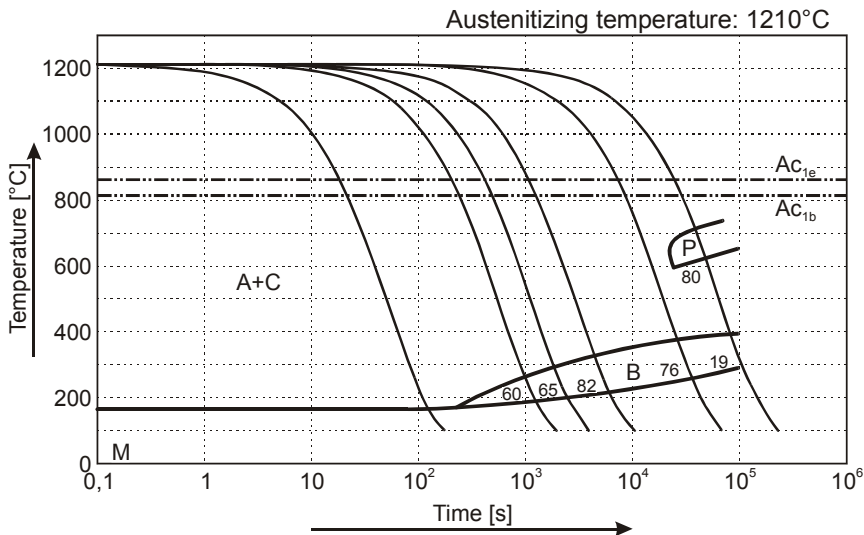
Hardening

| Temperature   | Cooling  | Tempering                |
|---------------|--|--------------------------|
| 1180 - 1230°C | oil, pressure gas (N <sub>2</sub> ),<br>air or hot bath<br>500 - 550°C | see tempering<br>diagram |

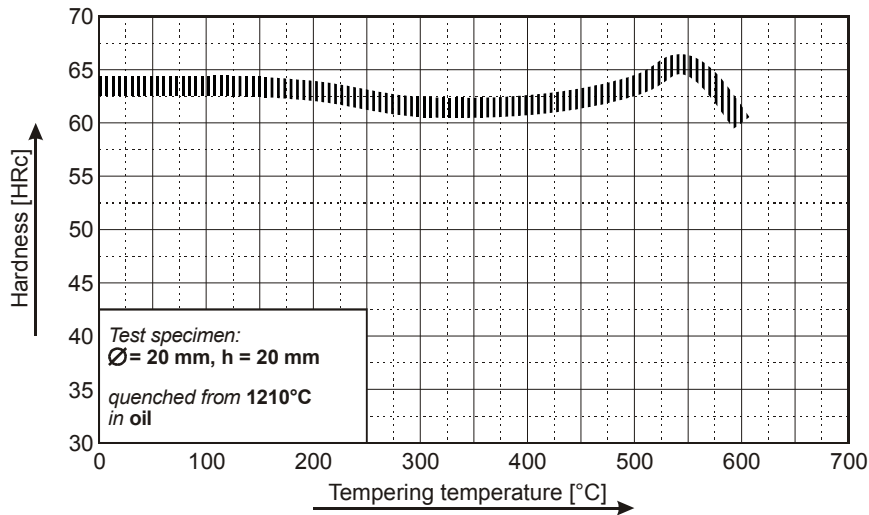
**(1.3343) Thermal Cycle Diagram**



**Continuous Cooling Transformation Diagram (CCT)**



**Tempering Diagram**



Remarks: All technical information is for reference only.