



## SIHARD 2552 Steel

### Designation by Standards

| Brand Name  | Ravne    | Mat. No. | DIN       | EN | AISI/SAE |
|-------------|----------|----------|-----------|----|----------|
| SIHARD 2552 | OSIKROSP | 1.2552 † | 80WCrV8 † | -  | -        |

### Chemical Composition (in weight %)

| C    | Si   | Mn   | Cr   | Mo   | Ni | V    | W    | Others |
|------|------|------|------|------|----|------|------|--------|
| 0.80 | 0.50 | 0.40 | 1.10 | 0.15 | -  | 0.30 | 1.95 | -      |

### Description

Low alloyed cold working tool steel.

### Applications

For tough and wear resistant cutting tools (dies, punchers) for plate, woodworking tools, etc.

### Physical properties (average values) at ambient temperature

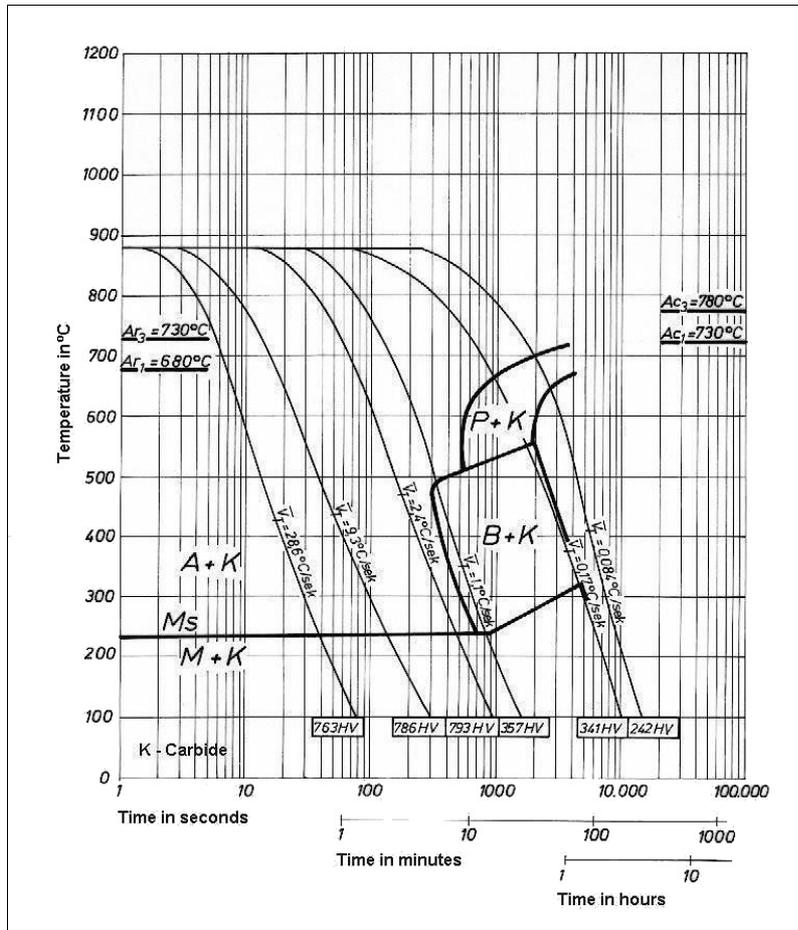
Modulus of elasticity [ $10^3 \times \text{N/mm}^2$ ]: 210

Density [ $\text{g/cm}^3$ ]: 7.94

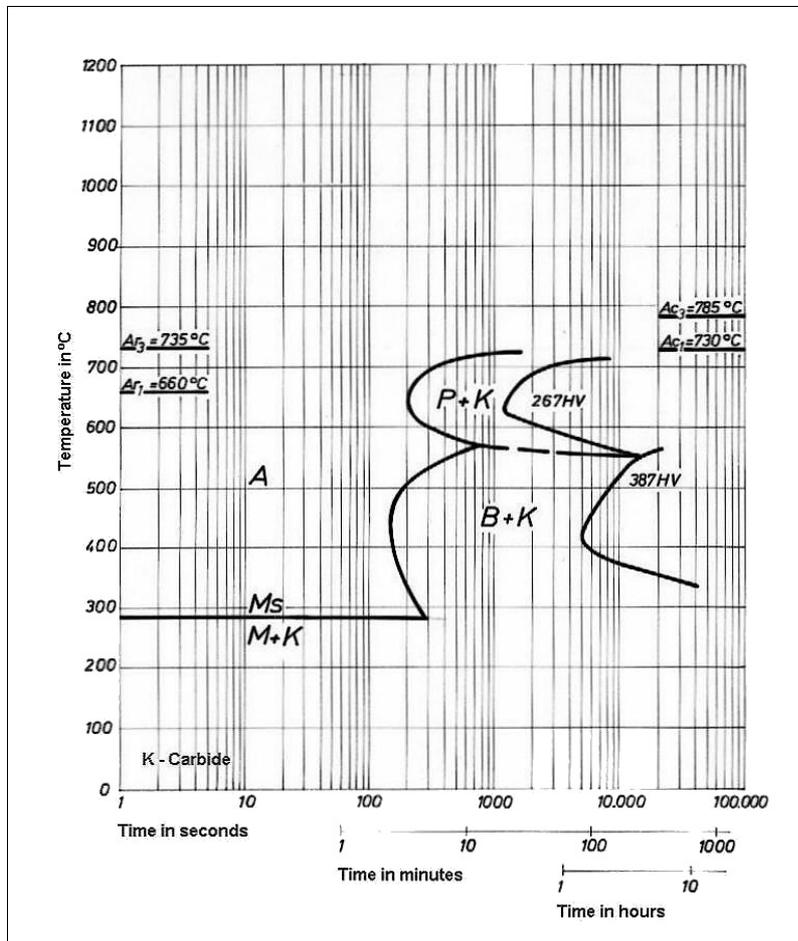
### Coefficient of Linear Thermal Expansion $10^{-6} \text{ } ^\circ\text{C}^{-1}$

| 20-100°C | 20-200°C | 20-300°C | 20-400°C | 20-500°C | 20-600°C | 20-700°C |
|----------|----------|----------|----------|----------|----------|----------|
| 10.7     | 12.1     | 12.1     | 12.6     | 13.2     | 13.6     | 14.1     |

Continuous Cooling Transformation (CCT) Diagram



Time-Temperature Transformation (TTT) Diagram



### Soft Annealing

Heat to 720-750°C, cool slowly in furnace. This will produce a maximum Brinell hardness of 250.

### Stress Relieving

Stress relieving to remove machining stresses should be carried out by heating to approx. 650°C, holding for 1-2 hours at heat, followed by air cooling. This operation is performed to reduce distortion during heat treatment.

### Hardening

Harden from a temperature of 860-900°C followed by oil quenching. Hardness after quenching is min. 62 HRC.

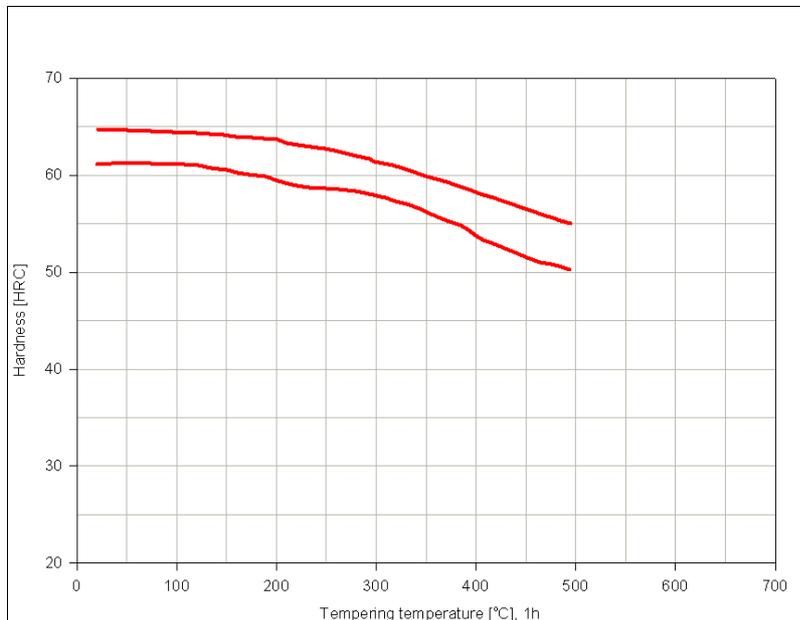
### Tempering

Tempering temperature: 150-400°C. Average hardness after tempering is 54-62 HRC.

### Tempering Temperature (°C) vs. Hardness (HRC)

| 100°C | 200°C | 300°C | 400°C | 500°C |
|-------|-------|-------|-------|-------|
| 62.5  | 61.5  | 59.5  | 56.5  | 53    |

### Tempering Diagram



### Forging

Hot forming temperature: 1050-850°C.

### Machinability

No data.

Forms manufactured: Please see the [Dimensional Sales Program](#).

### Disclaimer

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