

# Cryodur 2767

45NiCrMo16

C 0.45 Si 0.25 Mn 0.35 Cr 1.40 Mo 0.20 Ni 4.00

## Steel properties

High hardenability and toughness, highly suitable for polishing, texturing and EDM machining.  
**We recommend the use of Cryodur 2767 (ESR) for extreme demands.**

## Standards

AISI 6F3

## Physical properties

### Coefficient of thermal expansion

at °C	20 – 100	20 – 200	20 – 300
$10^{-6} \text{ m}/(\text{m} \cdot \text{K})$ Annealed	11.7	12.6	13.1
$10^{-6} \text{ m}/(\text{m} \cdot \text{K})$ Quenched and tempered	12.0	12.5	13.0

### Thermal conductivity

at °C	100	150	200	250	300
$\text{W}/(\text{m} \cdot \text{K})$ Annealed	38.2	38.6	38.9	39.1	39.6
$\text{W}/(\text{m} \cdot \text{K})$ Quenched and tempered	27.7	28.9	29.7	30.5	31.0

## Applications

Cutlery dies, cutting tools for thick material, billet-shear blades, drawing jaws, massive embossing and bending tools, plastic moulds, reinforcements.

## Heat treatment

### Soft annealing °C

610 – 650

### Cooling

Furnace

### Hardness HB

max. 260

### Stress-relief annealing °C

approx. 600 – 650

### Cooling

Furnace

### Hardening °C

840 – 870

### Quenching

Air, oil or saltbath, 180 – 220 °C

### Hardness after quenching HRC

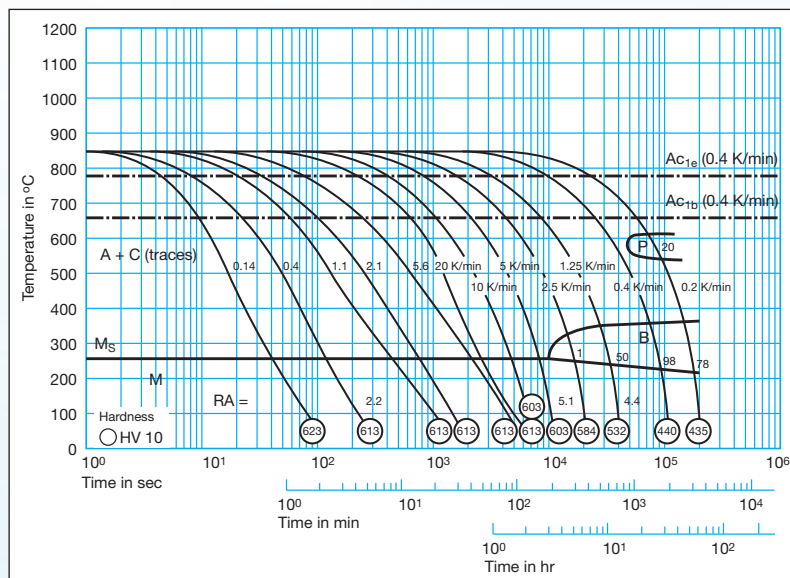
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### Tempering °C

HRC

100	200	300	400	500	600
56	54	50	46	42	38

## Time-temperature-transformation diagram



## Tempering diagram

