

# STEEL GRADE

Last revised: Thu, 30 Jan 2025 11:32:36 GMT

## 90Cr2 All

### General Information

Imatra CHA is designed for improved resistance against abrasive wear. This steel grade is mainly selected for fabrication of grinding rods and used in ore and rock processing. The core microstructure consists of fine lamellar perlite and thus offering good wear resistance in combination with sufficient toughness.

### Chemical composition

Variant	Cast		C %	Si %	Mn %	P %	S %	Cr %
CHA, 5600	CC	Min	0.83	0.15	0.60	-	-	0.60
		Max	0.95	0.35	0.80	0.035	0.040	0.80

## Mechanical Properties

Variant	Condition	Format	Dimension [mm]	Hardness
CHA, 5600	+AR	Round bar	40 < 120	300-400 HB

$R_{p0.2}$  \*  $R_{eh}$  \*\*  $R_{el}$

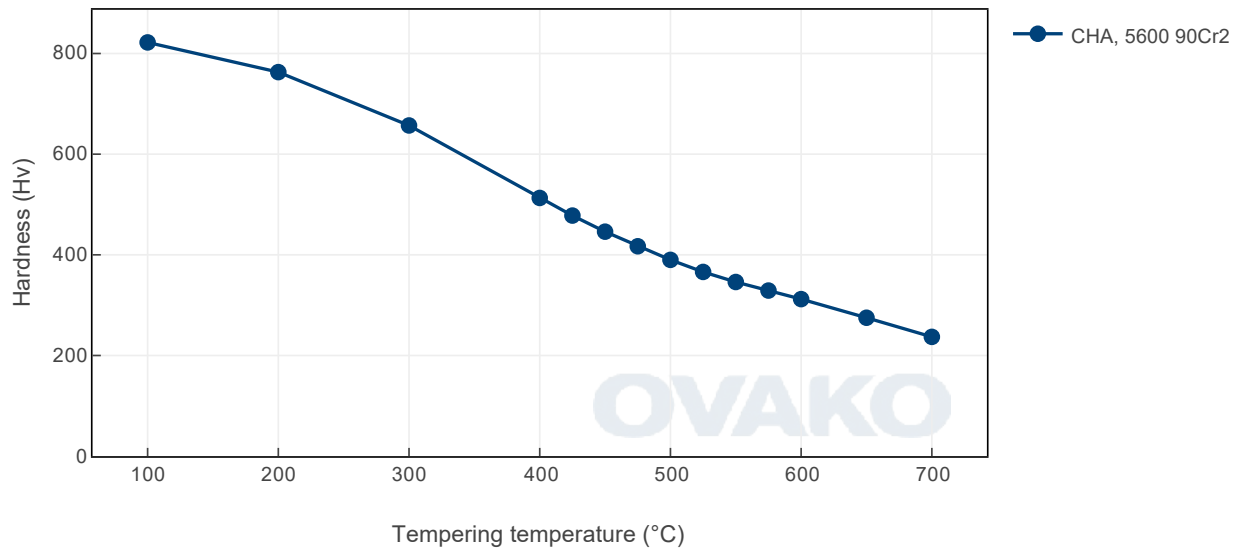
## Transformation temperatures

	Temperature °C
MS	250
AC1	750
AC3	750

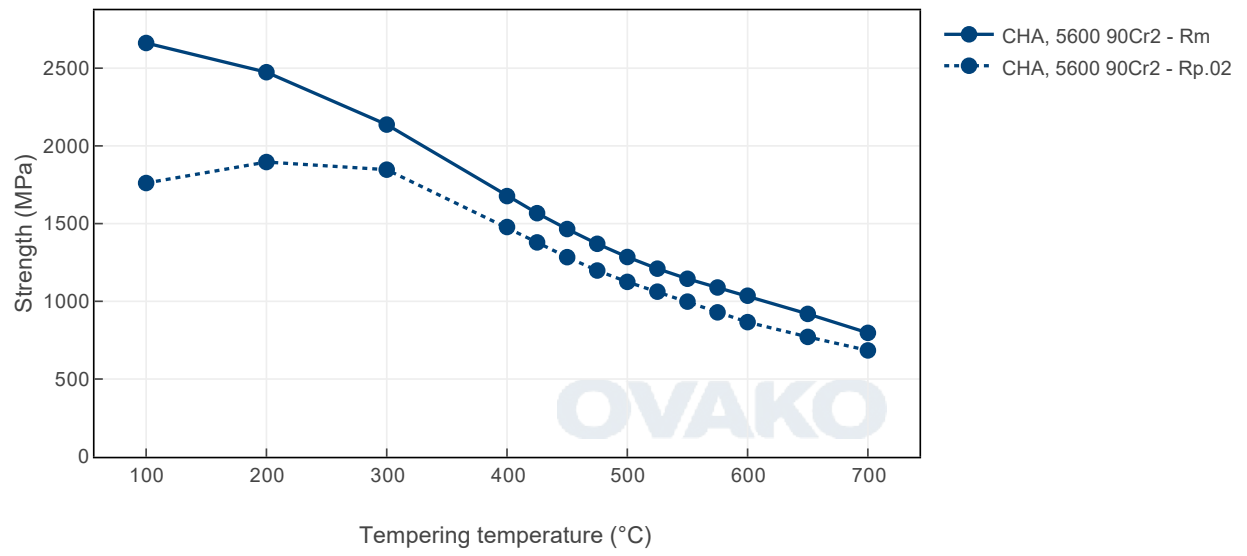
## Heat Treatment Guide generated Graphs

The following graphs are generated from a theoretical model. For further info see the Heat treatment guide module. Select a specific grade version for individual display.

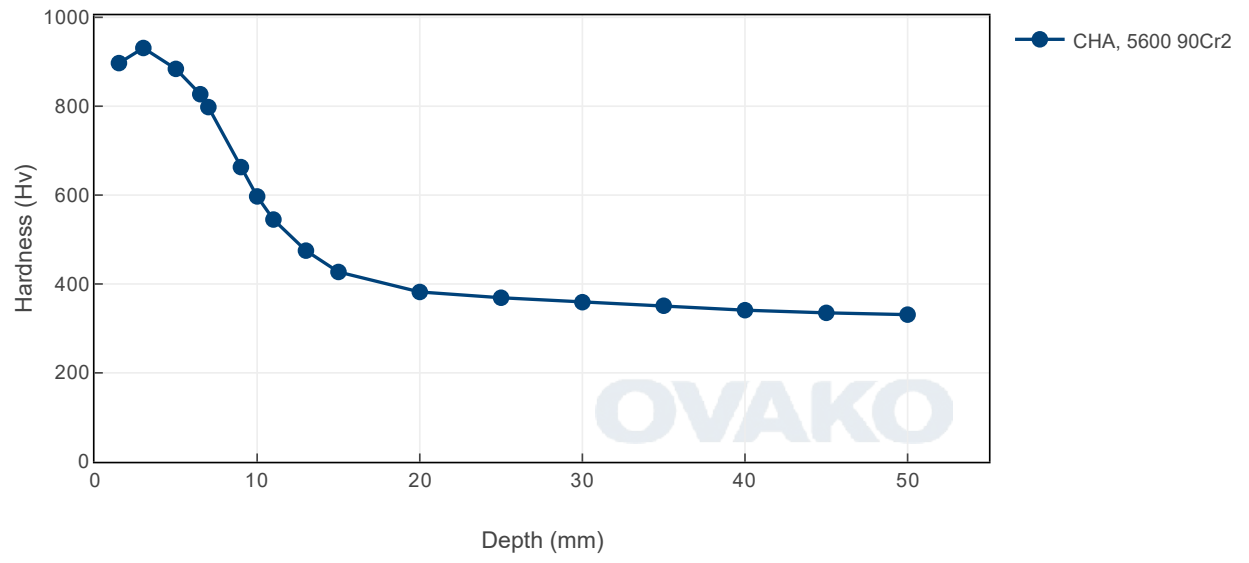
Tempering Diagram (hardness)



Tempering Diagram (strength)



# Jominy



## Other properties (typical values)

Youngs module (GPa)	Poisson´s ratio (-)	Shear module (GPa)	Density (kg/m <sup>3</sup> )
210	0.3	80	7800
Average CTE 20-300°C (µm/m°C)	Specific heat capacity 50/100°C (J/kg °K)	Thermal conductivity Ambient temperature (W/m°C)	Electrical resistivity Ambient temperature (µΩm)
12	460 - 480	40 - 45	0.20 - 0.25

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