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# 15NiMo14-2\* All



#### **General Information**

15NiMo14-2\* or SAE 4815 as it is also named in US standards is a case hardening steel used in forgings to eg rock drilling tools.

### Similar designations

SAE 4815

### **Chemical composition**

Variant	Cast	Weldability		С %	Si %	Mn %	Р%	s %	Cr %	Ni %	Мо %	Cu %
4707	СС	CEV 0.58 <sub>max</sub>	Min	0.13	0.20	0.40	-	-	-	3.35	0.20	-
		Pcm 0.29 <sub>max</sub>	Max	0.17	0.30	0.60	0.025	0.015	0.25	3.55	0.30	0.25

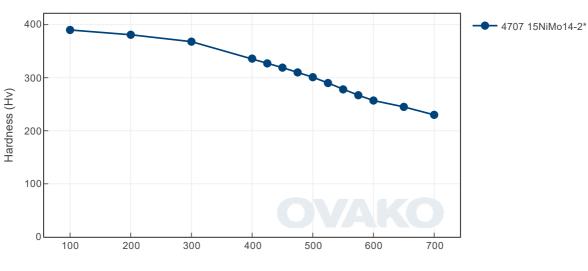
# Transformation temperatures

Temperature °C			
MS	393		
AC1	671		
AC3	791		

### **Heat Treatment Guide generated Graphs**

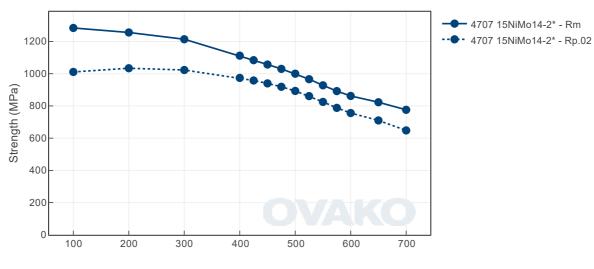
The following graphs are generated from a theoretical model. For further info see the Heat treatment guide module. Select a specific grade version for individual display.

### Tempering Diagram (hardness)



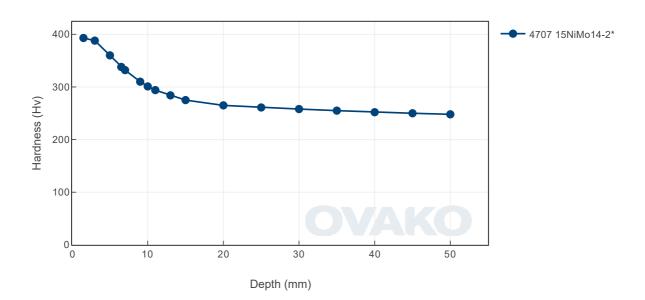
Tempering temperature (°C)

#### Tempering Diagram (strength)



Tempering temperature (°C)

## Jominy



#### SUSTAINABILITY-ENVIRONMENTAL IMPACT DATA

At Ovako sustainability and reduction of our environmental impact is a major focus in everything we do.

Further information is found here.

Steel works	Hofors	Smedjebacken	Imatra
CO2e/kg	120	62	76

To get the full picture of our products environmental impact we have to look at all of our CO<sub>2</sub> emission sources.

Not only the steel work Scope 1-2 itself, but all operations downstream in our production, heating and heat treatment furnaces etc (full scope 1-2) as well as all the emission from input material, eg. alloys, scope 3.

Steel Grade	Format	_		Climate compensated Net emission = Scope 3 (CO2e kg /1000 kg steel) Scope 1 - 2 = 0 (compensated)
4707	Round bar	+AR	1050	747

All above data are to be seen as typical values for the specified format and condition. Detailed information about your specific product please contact your sales contact.

#### Other properties (typical values)

Youngs module (GPa)	Poisson's ratio (-)	Shear module (GPa)	Density (kg/m3)	
210	0.3	80	7800	
Average CTE 20- 300°C (µm/m°K)	Specific heat capacity 50/100°C (J/kg °K)	Thermal conductivity Ambient temperature (W/m°K)	Electrical resistivityAmbient temperature (μΩm)	
12	460 - 480	40 - 45	0.20 - 0.25	

#### Contact us

Would you like to know more about our offers? Don't hesitate to contact us:

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For more detailed information please visit http://www.ovako.com/en/Contact-Ovako/

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