

38MnVS6

All

General Information

Grade 38MnVS6 is a micro-alloyed medium carbon steel for general purposes. The steel is recommended for applications demanding high mechanical properties and smooth surfaces.

482A - Ingot cast variant

7221 - Continuous cast variant.

SB9857 - Continuous cast variant.

For additional Heat Treatment Data, please visit the Heat Treatment Guide

Similar designations

39MnV5, 1.1303

Chemical composition

Variant	Cast	Di	Weldability		C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	V %
482A	IC	3.5	CEV 0.75 _{max}	Min	0.37	0.35	1.25	-	0.020	0.20	0.15	-	0.110
			Pcm 0.53 _{max}	Max	0.40	0.42	1.35	0.025	0.028	0.26	0.20	0.05	0.150

Mechanical Properties

Variant	Condition	Format	Dimension [mm]	Yield strength min [MPa]	Tensile strength [MPa]	Elongation A ₅ [%]	Hardness	Impact (ISO-V) strength _{min}
482A	+AR	Round bar	90 < 140	580*	850-1000	14	< 300 HB	20 °C 20 J (long)

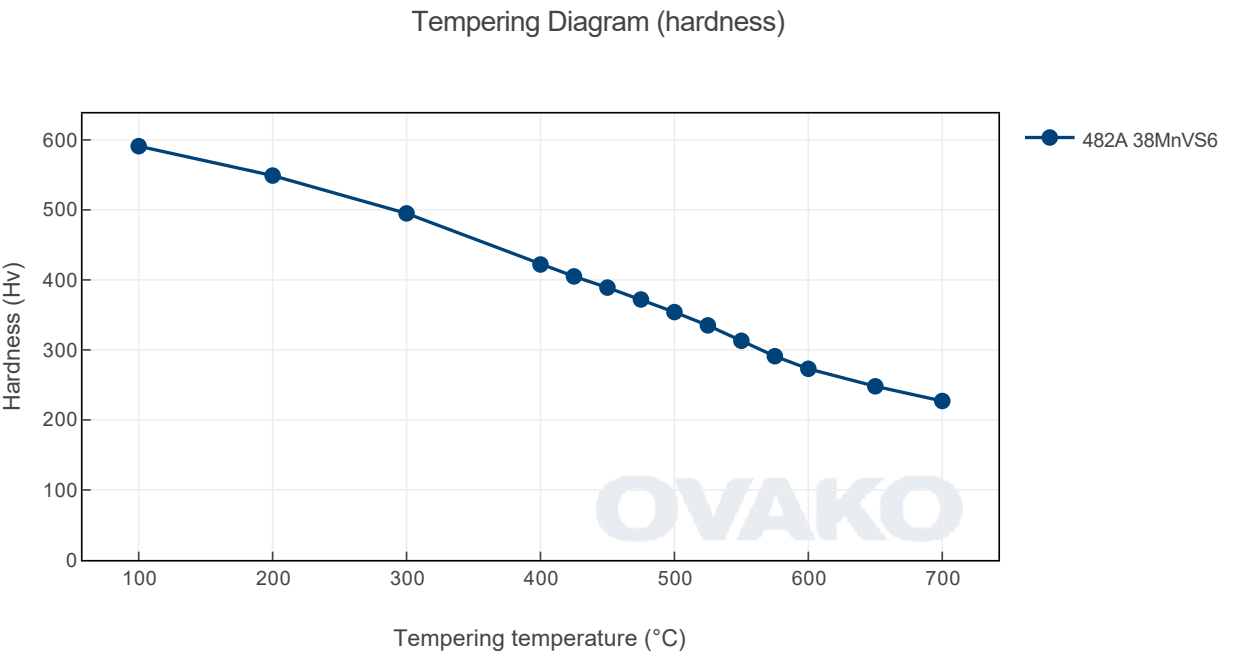
Rp0.2 * *ReH*, ** *ReL*

Transformation temperatures

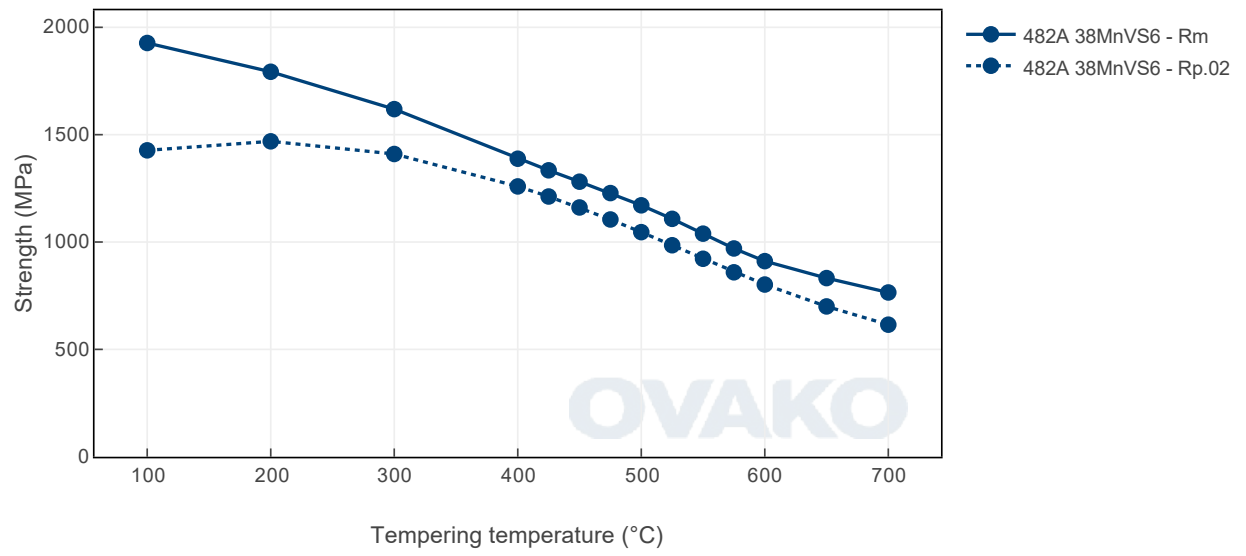
	Temperature °C
MS	330
AC1	720
AC3	780

Heat Treatment Guide generated Graphs

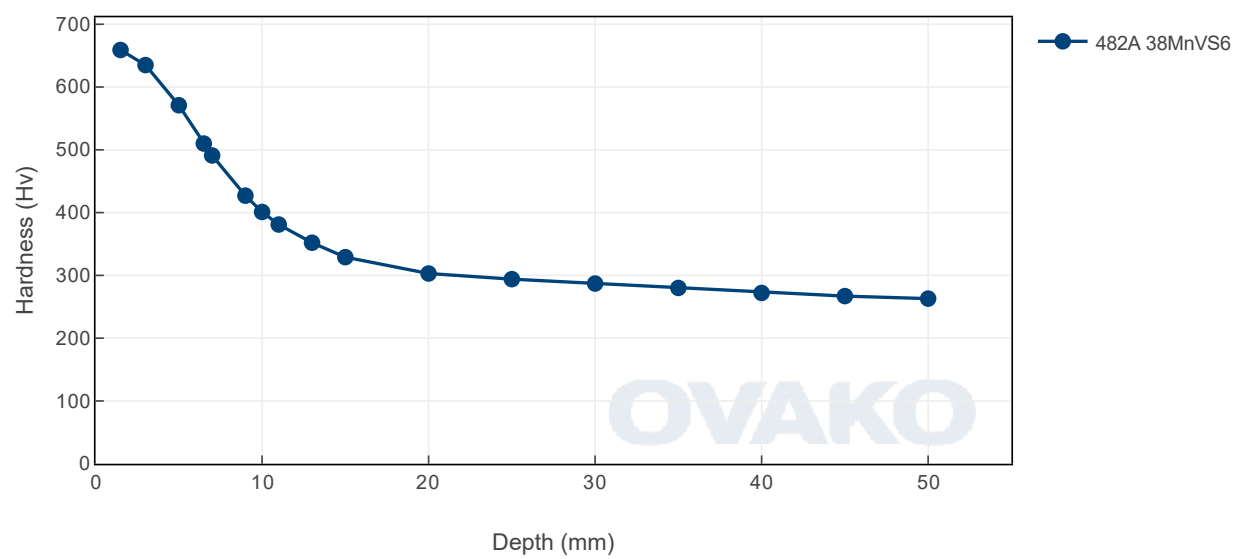
The following graphs are generated from a theoretical model. For further info see the Heat treatment guide module. Select a specific grade version for individual display.



Tempering Diagram (strength)



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
CO ₂ e/kg	120	62	76

To get the full picture of our products environmental impact we have to look at all of our CO₂ 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	Condition ⓘ	Scope 1-3 (CO ₂ e kg /1000 kg steel)	Climate compensated Net emission = Scope 3 (CO ₂ e kg /1000 kg steel) Scope 1 - 2 = 0 (compensated)
482A	Round bar	+AR	596	197
482A	Round bar	+N	601	200
482A	Tube,wall	+AR	617	220
482A	Tube,wall	+N	620	222
SB9857	Round bar	+AR	407	187
7221	Round bar	+AR	490	209
7221	Round bar	+QT	737	250

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 resistivity Ambient 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/>

Disclaimer

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