Last revised: Fri, 17 Jan 2025 10:36:15 GMT





#### **General Information**

Grade SB24M13B is a boron steel for general purposes without any specified mechanical properties. Its closest equivalent is found in the standard number 22MnB5. This grade is suitable to serve as chains (side-links) in materials handling equipment of various kinds that are exposed to heavy wear and varying stresses (bending, tensile, fatigue). This grade also works well as wear parts in snow ploughs/graders and in the machinery of agriculture machines because of its good hardness and toughness in heat-treated condition in dimensions up to Ø 40 mm or equivalent thickness.

#### Similar designations

SB24M13B - 24MnB5-4, 1.5528

### Chemical composition

Variant	Cast	Weldability		C %	Si %	Mn %	Р%	s %	Cr %	В %
22MnB5	Std	CEV 0.52 <sub>max</sub>	Min	0.19	-	1.10	-	-	-	0.0008
		Pcm 0.33 <sub>max</sub>	Max	0.25	0.40	1.40	0.025	0.015	0.40	0.0050

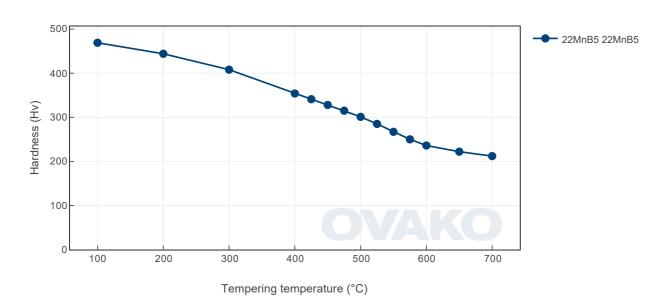
# Transformation temperatures

	Temperature °C
MS	400
AC1	719
AC3	790

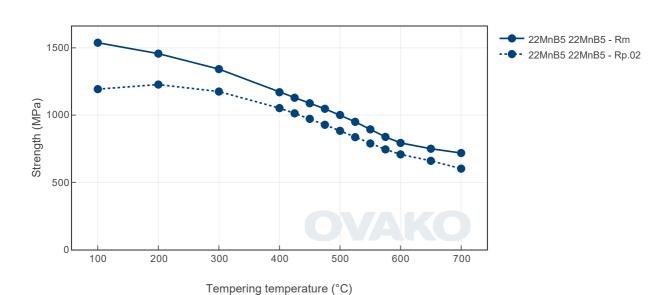
# **Heat Treatment Guide generated Graphs**

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.

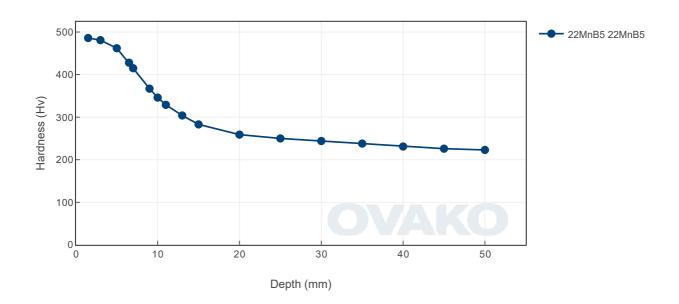
# Tempering Diagram (hardness)



# Tempering Diagram (strength)



# Jominy



#### 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)			
SB24M13B	Flat bar	+AR	399	162			
22MnB5	Flat bar	+AR	399	162			

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:

Via e-mail: info@ovako.com

Via telephone: +46 8 622 1300

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

#### Disclaimer

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