MATERIAL DATA SHEET STEEL GRADE

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 \emptyset 40 mm or equivalent thickness.

Similar designations

SB24M13B - 24MnB5-4, 1.5528

Chemical composition

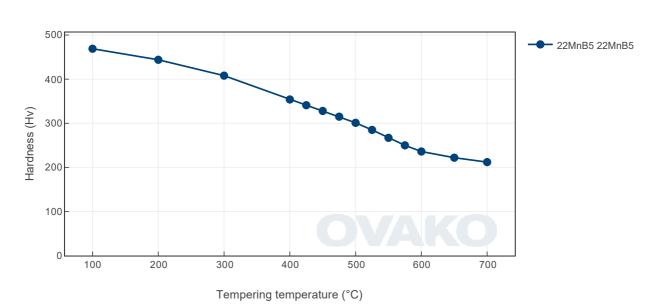
Variant	Cast	Weldability		С%	Si %	Mn %	Р%	S %	Cr %	В %
22MnB5	Std	CEV 0.52 _{max}	Min	0.19	-	1.10	-	-	-	0.0008
		Pcm 0.33 _{max}	Max	0.25	0.40	1.40	0.025	0.015	0.40	0.0050

Transformation temperatures

	Temperature °C
MS	400
AC1	719
AC3	790

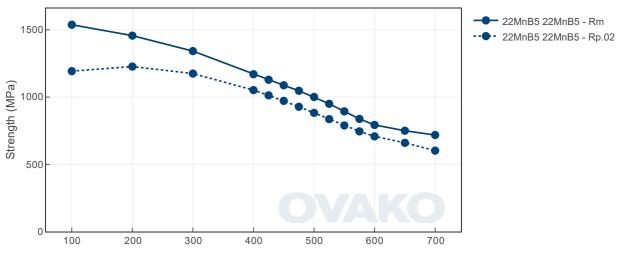
Heat Treatment Guide generated Graphs

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.



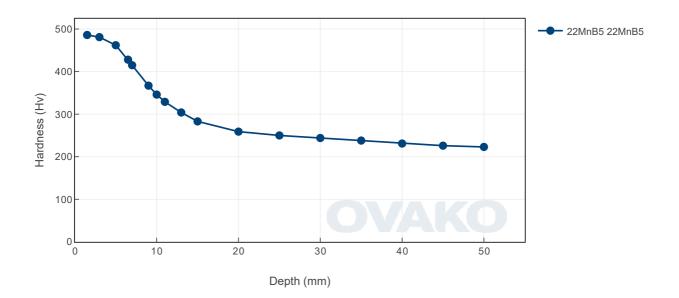
Tempering Diagram (hardness)





Tempering 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_2 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:

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Via telephone: +46 8 622 1300

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

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