

24MnV6* All

General Information

Grade SB600 is a micro-alloyed steel for general purposes. It is recommended for applications requiring high yield strength in the as rolled condition. The chemical composition has no standardised equivalent, but is unique to Ovako Bar.

* Designation followed by "*" is not an official EN standard grade but named according to the rules in EN 10027.

Chemical composition

Variant	Cast	Weldability		C%	Si %	Mn %	P%	S%	V%
SB600	CC	CEV 0.47 _{max}	Min	0.20	0.15	0.60	-	-	-
		Pcm 0.32 _{max}	Max	0.25	0.54	1.65	0.025	0.035	0.200

Mechanical Properties

Variant	Condition	Format	Dimension [mm]	Yield strength min [MPa]	Tensile strength [MPa]	Elongation A ₅ [%]	Hardness
SB600	+AR	Round bar	< 15	600*	820-920	14	240-280 HB
		Round bar	15 < 30	600*	780-870	14	225-265 HB
		Round bar	30 < 80	570*	740-870	14	215-265 HB
		Flat bar	5 < 15	600*	740-920	14	215-280 HB
		Flat bar	15 < 30	570*	700-870	14	210-265 HB
		Flat bar	30 < 60	540*	700-870	14	210-265 HB

*R_{p0.2} * R_{eh}, ** R_{el}*

Transformation temperatures

	Temperature °C
MS	407
AC1	721
AC3	820

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

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