

## STEEL GRADE

Last revised: Thu, 30 Jan 2025 11:31:48 GMT

8CrMnMo15-4\* All

## General Information

8303, also known as, Imacro NIT has been designed for nitriding. After nitriding, it gives a similar hardness distribution as aluminium alloyed nitriding steels, and also has a much better machinability.

## Similar designations

8CrMoV16-5

## Chemical composition

Variant	Cast	Di	Weldability		C %	Si %	P %	S %	Cr %	Mo %	Cu %
8303	CC	6.03	CEV 1.15 <sub>max</sub>	Min	0.04	0.10	-	0.010	3.70	0.40	-
			Pcm 0.38 <sub>max</sub>	Max	0.12	0.40	0.025	0.035	4.30	0.60	0.25

## Mechanical Properties

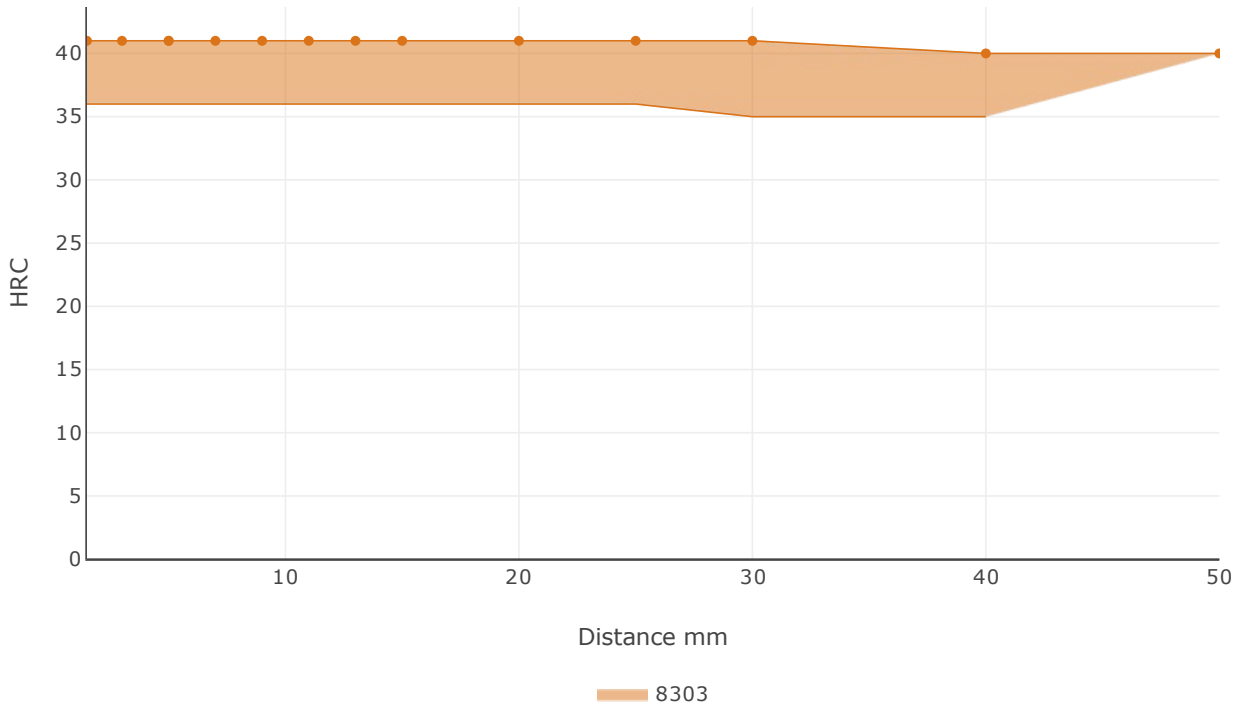
Variant	Condition	Format	Dimension [mm]	Yield strength min [MPa]	Tensile strength [MPa]	Elongation A <sub>5</sub> [%]	Reduction of area Z <sub>min</sub> [%]	Hardness	Impact (ISO-V) strength <sub>min</sub>
8303	+AR	Round bar	25 < 140	-	-	-	-	< 320 HB	-
	+A	Round bar	25 < 140	-	-	-	-	< 150 HB	-
	+QT	Round bar	25 < 120	700	800-1000	14	55	< 290 HB	-40 °C 35 J (long)

*RP<sub>0.2</sub> \* R<sub>eh</sub> \*\* P<sub>el</sub>*

## Transformation temperatures

	Temperature °C
MS	376
AC1	769
AC3	861

## Hardenability



## 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	Condition	Scope 1-3 (CO2e kg /1000 kg steel)	Climate compensated Net emission = Scope 3 (CO2e kg /1000 kg steel) Scope 1 - 2 = 0 (compensated)
Imacro NIT, 8303	Round bar	+AR	613	332
Imacro NIT, 8303	Round bar	+QT	884	397

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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Via telephone: +46 8 622 1300

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

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