

S355JR All

General Information

S355 is a structural micro-alloyed grade used for a great variety of applications. It is standardized with a specified impact strength of 27 J at a few different temperatures, but EN10027 gives guidelines how to extend the designation.

Similar designations

S355K2 - 15Mn4, S355JR - C16, S355J2 - C16

Chemical composition

Variant	Cast	Weldability		C %	Si %	Mn %	P %	S %	Cu %	N %
S355JR / 2132	CC	CEV 0.52 _{max}	Min	-	-	-	-	-	-	-
		Pcm 0.35 _{max}	Max	0.24	0.55	1.60	0.040	0.040	0.40	0.0120
S355JR EN10025-2:2019	Std	CEV 0.52 _{max}	Min	-	-	-	-	-	-	-
		Pcm 0.35 _{max}	Max	0.24	0.55	1.60	0.035	0.035	0.55	-

Mechanical Properties

Variant	Condition	Format	Dimension [mm]	Yield strength min [MPa]	Tensile strength [MPa]	Elongation A ₅ [%]	Hardness	Impact (ISO-V) strength _{min}
S355JR / 2132	+AR	Flat bar	< 16	355**	470-630	22	140-190 HB	20 °C 27 J (long)
		Flat bar	16 < 40	345**	470-630	22	140-190 HB	20 °C 27 J (long)
		Flat bar	40 < 63	335**	470-630	21	140-190 HB	20 °C 27 J (long)
		Flat bar	63 < 80	325**	470-630	20	140-190 HB	20 °C 27 J (long)
		Flat bar	80 < 100	315**	470-630	20	140-190 HB	20 °C 27 J (long)

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

Transformation temperatures

	Temperature °C
MS	540
AC1	720
AC3	790

Other properties (typical values)

Youngs module (GPa)	Poisson´s ratio (-)	Shear module (GPa)	Density (kg/m ³)
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:

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

The information in this document is for illustrative purposes only. The data and examples are only general recommendations and not a warranty or a guarantee. The suitability of a product for a specific application can be confirmed only by Ovako once given the actual conditions. The purchaser of an Ovako product has the responsibility to ascertain and control the applicability of the products before using them. Continuous development may necessitate changes in technical data without notice. This document is only valid for Ovako material. Other material, covering the same international specifications, does not necessarily comply with the properties presented in this document.