

## P355NH All

### General Information

Hot rolled weldable steel bars for pressure purposes with specified elevated temperature properties.

### Similar designations

WStE 355, A 510AP, FeE 355-2

### Chemical composition

Variant	Cast	Weldability		C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	V %	Ti %	Cu %	Al %	Nb %	N %
2714	CC	CEV 0.43 <sub>max</sub>	Min	0.01	0.01	1.10	0.000	0.000	0.00	0.00	0.00	0.000	0.000	0.00	0.020	0.000	0.0000
		Pcm 0.27 <sub>max</sub>	Max	0.18	0.50	1.70	0.025	0.010	0.30	0.50	0.08	0.100	0.030	0.30	-	0.050	0.0120

## Mechanical Properties

Variant	Condition	Format	Dimension [mm]	Yield strength min [MPa]	Tensile strength [MPa]	Elongation A <sub>5</sub> [%]	Impact (ISO-V) strength <sub>min</sub>
2714	+AR	Round bar	25 < 35	355*	490-630	22	-20 °C 40 J (long)
		Round bar	35 < 50	345*	490-630	22	-20 °C 40 J (long)
		Round bar	50 < 70	325*	490-630	22	-20 °C 40 J (long)
		Round bar	70 < 100	315*	470-610	21	-20 °C 40 J (long)
		Round bar	100 < 150	295*	450-590	21	-20 °C 40 J (long)

*R<sub>p0.2</sub> \* R<sub>eh</sub>, \*\* R<sub>el</sub>*

## Transformation temperatures

	Temperature °C
MS	432
AC1	717
AC3	847

## Other properties (typical values)

Youngs module (GPa)	Poisson's ratio (-)	Shear module (GPa)	Density (kg/m <sup>3</sup> )
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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