

Grade AISI 304L / EN 1.4307 is an austenitic steel with a low carbon content. It has excellent welding properties and a good corrosion resistance. This stainless steel grade is suitable for welding and cold forming and characterized by its low magnetizability.

Processing options include cold heading and polishing.

**Chemical composition (% by mass according to DIN EN 10088-3 for EN 1.4307)**

C	Si	Mn	P	S	N	Cr	Cu	Mo	Ni	Ti	Other
≤ 0,03	≤ 1,00	≤ 2,00	≤ 0,045	≤ 0,03	≤ 0,10	17,5 – 19,5	-	-	8,0 – 10,5	-	-

**Specification**

EN-grade	1.4307
EN-short name	X2CrNi18-9
EN-standard	10088-3
AISI	304 L *
B.S.	304S11 *
JIS	SUS304L *
Microstructure	austenite

**Physical properties**

Magnetizability	low
Density (kg/dm <sup>3</sup> )	7,9
Thermal conductivity (up to 20°C)	15
Electronic resistance at room temperature (in Ω mm <sup>2</sup> /m)	0,73

**Possible fields of application**

aerospace industry  
 architecture  
 automobile industry  
 chemical industry  
 food industry  
 mechanical engineering  
 and more

**Mechanical properties at room temperature in solution annealed condition (according to EN 10088-3 for EN 1.4307)**

Ø in mm	Hardness in HB	Yield strength		Tensile strength R <sub>m</sub> in Mpa	Elongation A in%
		R <sub>p0,2</sub> in Mpa	R <sub>p1,0</sub> in Mpa		
≤ 160	≤ 215	≤ 175	≤ 210	500-700	45
160 < d ≤ 250	≤ 215	≤ 175	≤ 210	500-700	-

**Yield strength at elevated temperature in solution annealed condition (according to EN 10088-3 for EN 1.4307)**

Temperature in °C	100	150	200	250	300	350	400	450	500	550
R <sub>p0,2</sub> in Mpa	145	130	118	108	100	94	89	85	81	80
R <sub>p1,0</sub> in Mpa	180	160	145	135	127	121	116	112	109	108

(\* in accordance with)

#### Heat treatment and hot forming

Solution heat treatment  
(cooling by air or water) 1000-1100 °C

Hot forming  
(cooling by air) 1200-900 °C

#### Welding

Grade 1.4307 can be applied for a variety of different welding processes such as arc welding or TIG welding. Please note, however, that this stainless steel grade is suitable only to a limited extent when employed for gas fusion welding and submerged arc welding.

If you have further questions about this or any other product, please contact our team at +49 2263-9240-0 or email [agst@agst.de](mailto:agst@agst.de)

#### Please note:

The information given in this data sheet has been compiled to the best of our knowledge and is based on the current version of the relevant standard.

It is considered for reference only and we assume no liability for any errors.