

The material 1.4597 / AISI 204Cu is an austenitic stainless steel. As a substitute for the materials 1.4301 / 1.4307, it is characterised by a higher copper content of 2.0 - 3.5 % and an increased manganese content of 6.5 - 9.0 % with a lower nickel content (≤ 3.0 %). The material is malleable and has good resistance to corrosion and stress cracking. Stainless steel 1.4597 / AISI 204Cu is typically used in various industrial sectors, such as the automotive industry, the electronics industry or industrial chemistry.

Chemical composition (% by mass according to DIN EN 10088-3 for 1.4597)

C	Si	Mn	P	S	N	Cr	Cu	Mo	Ni	Ti	Other
$\leq 0,10$	$\leq 2,00$	6,50 - 9,00	$\leq 0,04$	$\leq 0,03$	0,10 - 0,30	15,0 - 18,0	2,0 - 3,5	$\leq 1,00$	$\leq 3,00$	-	-

Please note that AISI 204Cu may contain a mass fraction of P ≤ 0.07 and Cu 1.5-3.5 outside EN 10088-3.

Specification

EN-grade	1.4597
EN-short name	X8CrMnCuNB17-8-3
EN-standard	10088-3
AISI	204 Cu*
B.S.	BS 3111
Microstructure	austenite

Possible fields of application

Automotive industry
Chemical industry
Electrical industry
Food industry
and more

Heat treatment and hot forming

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

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

Mechanical properties at room temperature in solution annealed condition (according to EN 10088-3 for EN 1.4597)

Ø in mm	Hardness in HBW	Yield strength		Tensile strength R _m in Mpa	Elongation A in%
		R _{p0,2} in Mpa	R _{p1,0} in Mpa		
≤ 160	≤ 245	≥ 270	≥ 305	560-780	40
-	-	-	-	-	-

Yield strength at elevated temperature in solution annealed condition (according to EN 10088-3 for EN 1.4597)

Temperature in °C	100	150	200	250	300	350	400	450	500	550
R _{p0,2} in Mpa	225	205	190	177	165	152	145	140	137	135
R _{p1,0} in Mpa	260	235	218	204	190	180	175	168	165	165

(* in accordance with)

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

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

