

Appendix / Material characteristics of stainless steels

AISI standard	304	303	CF-8
German Material No.	1.4301	1.4305	1.4308 precision-cast
DIN / EN number	EN 10088-3	EN 10088-3	EN 10213-4
Short name	X 5 CrNi 18-10	X 8 CrNiS 18-9	GX 5CrNi 19-10
Alloy constituents in %	Cr ≤ 0,07 Cr 17,5 ... 19,5 Ni 8,0 ... 10,5	C ≤ 0,10 S ≤ 0,15 ... 0,35 Cr 17,0 ... 19,0 Ni 8,0 ... 10,0	Cr ≤ 0,07 Cr 18,0 ... 20,0 Ni 8,0 ... 11,0
Minimum strength Rm in N/mm ²	500 ... 700	500 ... 700	440 ... 640
Yield point Rp 0.2 in N/mm ²	≥ 190	≥ 190	≥ 175
Machinability	Medium	Very good	Medium
Forgeability	Good	Poor	–
Welding suitability	Excellent	Poor	Good
Special properties	Antimagnetic, austenitic structure suitable for low temperatures and usable up to 700 °C	Antimagnetic, austenitic structure	Antimagnetic, austenitic structure
Corrosion resistance	Good Corrosion-resistant in natural environment: Water, rural and urban atmospheres without significant chloride or acid concentrations, in food-processing areas and agricultural areas	Medium Due to the sulphur content reservations in environments which contain acids and chlorides	Good Corrosion-resistant, the material is largely comparable with 1.4301 / AISI 304
Main areas of application	Food industry Agriculture Chemical industry Automotive industry Construction industry Machine building Decorative purposes (kitchen appliances)	Vehicle construction Electronics Decorative purposes (kitchen equipment) Machine construction	Food industry Beverage industry Packaging industry Fittings and valves Pumps Mixers

The indicated properties are intended as guide values only. No guarantee is provided in this regard. The exact usage conditions must always be taken into account.