The standard under the austenitic chromium-nickel stainless steels – „The classic V2A“ (1.4301)

Code	X5CrNi18-10
US standard (AISI)	304
Composition Alloying components [%]	■ C: 0 - 0.07 ■ Cr: 17.50 - 19.50 ■ Mn: 0 - 2.00 ■ N: 0 - 0.10 ■ Ni: 8.00 - 10.50 ■ P: 0 - 0.045 ■ S: 0 - 0.015 (0.030*) ■ Si: 0 - 1.00 ■ Remainder: Fe
Stainless steel grade	A2
Density [g/cm^3]	7.9
Nickel migration [µg/(cm^2 x week)] in artificial perspiration (pH 4.5)	<0.05
Yield point Rp0.2 [N/mm^2]	≥190
Tensile strength Rm [N/mm^2]	500 - 700
Corrosion resistance	■ Good ■ Resistant under natural environmental conditions and in light concentrations of chlorine and salt ■ Solution annealed for resistance to intergranular corrosion
Machinability	medium
Weldability	very good
Other properties	■ Austenitic non-magnetic structure with good tenacity ■ Can be mechanically polished to a mirror finish ■ Suitability for electropolishing: very good ■ For use in the temperature range -50 - 600°C
Main uses	■ With a stainless steel market share of approx. 33%, 1.4301 is the most commonly used material for components that are subject to moderate stress ■ Branches of industry ■ Food industry ■ Oil industry ■ Tank and container construction ■ Architecture and construction industry ■ Automotive industry ■ Jewellery industry