Austenitic chromium-nickel-molybdenum stainless steel (1.4401)

Code	X5CrNiMo17-12-2
US standard (AISI)	316
Composition Alloying components [%]	■ C: 0 - 0.07 ■ Cr: 16.50 - 18.50 ■ Mn: 0 - 2.00 ■ Mo: 2.00 - 2.50 ■ N: 0 - 0.10 ■ Ni: 10.00 - 13.00 ■ P: 0 - 0.045 ■ S: 0 - 0.015 (0.030*) ■ Si: 0 - 1.00 ■ Remainder: Fe
Stainless steel grade	A4
Density [g/cm^3]	8.0
Nickel migration [µg/(cm^2 x week)] in artificial perspiration (pH 4.5)	<0.05
Yield point Rp0.2 [N/mm^2]	≥200
Tensile strength Rm [N/mm^2]	500 - 700
Corrosion resistance	■ Very good ■ Resistant to moderate chloride and salt concentrations, and to the conditions encountered within the food industry ■ Susceptible to intergranular corrosion
Machinability	medium
Weldability	medium
Other properties	■ Austenitic non-magnetic structure ■ Can be mechanically polished to a brilliant sheen ■ Suitability for electropolishing: very good ■ For use in the temperature range -50 - 600°C
Main uses	General applications involving high levels of corrosive stress within the following sectors: ■ Food industry ■ Swimming pool technology ■ Oil industry ■ Construction industry ■ Chemical industry ■ Medical engineering