1.4401(4)-316(L)

Austenitic stainless steel balls with higher corrosion resistance than AISI 304 balls. They show good toughness. AISI 316L has a lower carbon content (maximum 0,030%). Balls are provided in the passivated condition.

APPLICATION

Special bearings, pumps and valves, aerosol and dispenser sprayers. Utilised in the foodstuff, paper, chemical, rubber, military, textile industry. Applications in Photographie devices, medical instruments, quick coupiings, recirculating balls, ink cortridges, jewels.

CHEMICAL COMPOSITION

	C	Si	Mn	P	S*	Cr	Ni	Mo	-	C (316L)		
min	-	-	-			16,00	10,00	2,00		-	-	-
max	0,080	1,00	2,00	0,045	0,030	18,00	14,00	3,00	-	0,030	-	-

*It DIN 683-17

PHYSICAL / MECHANICAL / THERMAL / ELECTRICAL / MAGNETIC PROPERTIES

Property	Symbol	Unit	Type	Notes	Values
Density	δ	[g/cm^3]	Physikalisch	Room temp.	7,95
Young´s modulus	E	[GPa]	Mechanisch	-	200
Specific heat	c	[J/kg-K]	Thermisch	Room temp.	500
Coefficient lin. thermal expansion	α	[10^{-6}/ºC]	Thermisch	(DT=0-100°C)	17
Thermal conductivity	λ	[W/(m·K)]	Thermisch	Room temp.	15,0
Electric resistivity	ρ	[Ω*m*10^{-9}]	Elektrisch	-	730
Relaitv magnetic permeability	μ	-	Magnetisch	Paramagnetic	1,020

TECHNICAL DATA

Property	TYPE	UNIT	Values	Unit	Values
Härte	Mechanisch			[HRC]	25-39
Bruchlast	Mechanisch	[MPa]	550 – 1250	[$p_{six}10^3$]	80 – 180
Betriebstemperatur	Thermisch	[ºC]	-196 / 600	[ºF]	-320,8 / 1112

QUALITY AND DIAMETER

DRM mm	Einheit	DRM “	Einheit	Qualität DIN5401 / ISO 3290
> 300	[mm]	up to 12“	["]	G10 - 1000

CORRISION RESISTANCE

Very good corrosion resistance with respect to organic substances, good resistance to several strong acids (acetic, phosphoric, sulphuric acid) and on sea water. They are subjected to pitting and crevice corrosion in presence of hot Chloride Solutions and to stress corrosion when temperature exceeds 60°C. They do not resist in contact with hydrochloric and hydrofluoric acids, aqua regia, iron and magnesium Chlorides.

NOTES

Balls can be supplied in the ANNEALED (HRC 10-25) or COLD WORKED (HRC 25-39) conditions. Eventual magnetism of AISI 316 balls and in general of all austenitc stainless steels strictly depends by the manufacturing process, specific inquiries for not magnetic balls should priorly reported. On specifical request and for big quantities, we can supply G10 and G16 precision grade balls. Diameters from 3,000 mm to 1/2".

STAINLESS STEEL 1.4401/1.4404 – AISI 316/AISI316L