

# 1.4301(7)-304(L)

Austenitic stainless steel ball. They display good mechanical characteristics, toughness and corrosion resistance. AISI 304L provides lower carbon content. 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 couplings, recirculating balls, ink cortridges, jewels.

## CHEMICAL COMPOSITION

	C	Si	Mn	P	S	Cr	Ni	N	-	C (304L)		
min	-	-	-			18,00	8,00	-		-	-	-
max	0,080	0,75	2,00	0,045	0,030	20,00	10,50	0,100	-	0,030	-	-

## PHYSICAL / MECHANICAL / THERMAL / ELECTRICAL / MAGNETIC PROPERTIES

Property	Symbol	Unit	Type	Notes	Values
Density	$\delta$	[g/cm <sup>3</sup> ]	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	$\alpha$	[10 <sup>-6</sup> /°C]	Thermisch	(DT=0-100°C)	17,5
Thermal conductivity	$\lambda$	[W/(m·K)]	Thermisch	Room temp.	15,8
Electric resistivity	$\rho$	[ $\Omega$ *m*10 <sup>-9</sup> ]	Elektrisch	-	710
Relativ magnetic permeability	$\mu$	-	Magnetisch	Paramagnetic	1,025

## TECHNICAL DATA

Property	TYPE	UNIT	Values	Unit	Values
Härte	Mechanisch			[HRC]	25-39
Bruchlast	Mechanisch	[MPa]	550 – 1250	[ $\rho_{\text{six}}10^3$ ]	72 - 188
Betriebstemperatur	Thermisch	[°C]	-196 / 600	[°F]	-320,8 / 1697

## QUALITY AND DIAMETER

DRM mm	Einheit	DRM "	Einheit	Qualität DIN5401 / ISO 3290
> 300	[mm]	up to 12"	["]	G100 - 1000

## CORRISION RESISTANCE

Very good corrosion resistance with respect to organic substances, oxidating solutions, foodstuff, sterilizing solutions. Good resistance with respect to atmospheric corrosion and dyes. 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 to sulfuric acid solutions.

## 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 austenitic stainless steels strictly depends by the manufacturing process, specific inquiries for not magnetic balls should be reported. On specific request and for big quantities, we can supply G10 to G80 precision grade balls. Diameters from 3,000 mm to 1/2".