

# GARBA 2205

Duplex stainless steel for demanding applications in high corrosive atmosphere

## Chemical composition

Element	Weight %
C max.	0.03%
Si max.	1.00%
Mn max.	2.00%
P max.	0.035%
S max.	0.015%
Cr	21.0 - 23.0%
Ni	4.5 - 6.5%
Mo	2.50 - 3.50%
N	0.10 - 0.22%

## Mechanical properties

Diameter (mm)	Tolerance (mm)	Normal tensile strength (N/mm <sup>2</sup> )	High tensile strength (N/mm <sup>2</sup> )
---------------	----------------	--	--

0.40 - 0.50	±0.008	2000 - 2300	
0.51 - 0.65	±0.008	1900 - 2190	
0.66 - 0.80	±0.010	1900 - 2190	2230 - 2570
0.81 - 1.00	±0.010	1800 - 2070	2140 - 2470
1.01 - 1.25	±0.012	1800 - 2070	2090 - 2410
1.26 - 1.50	±0.012	1700 - 1960	2090 - 2410
1.51 - 1.75	±0.012	1700 - 1960	2000 - 2300
1.76 - 2.00	±0.012	1700 - 1960	2000 - 2300
2.01 - 2.50	±0.015	1550 - 1790	1900 - 2190
2.51 - 3.00	±0.015	1550 - 1790	1860 - 2140
3.01 - 3.50	±0.015	1550 - 1790	
3.51 - 4.25	±0.020	1450 - 1670	
4.26 - 5.00	±0.025	1450 - 1670	

## Surface conditions

### Surface condition

#### Surface performance

AC coated or bright shiny surface.

## Physical properties

### Heat conductivity

Temperature °C	20	100	300
W/(m*°C)	14	16	19

### Resistivity

Temperature °C	20	100	200	300
nΩm	0.8	0.9	1.0	1.0

### Linear expansion

Pro °C	30 - 100	30 - 200	30 - 300
x10 <sup>-6</sup>	13.0	13.5	14.0

### Specific heat capacity

Temperature °C	20	200
J/(kg °C)	500	

## Technical specification

Property	Value	
E modulus of elasticity	Abt. 200 kN/mm <sup>2</sup> in drawn condition.	Abt. 210 kN/mm <sup>2</sup> after heat treatment.
G modulus of shear	Abt. 75 kN/mm <sup>2</sup> at 20°C	
Density	7.80 kg/dm <sup>3</sup>	

## Steel grades and product standards

Nearest equivalent product standards	EN ISO 6931-1	
Nearest equivalent steel grades	EN/DIN 1.4462	