

GARBA 2205

Duplex Stainless Steel for Demanding Applications in High Corrosive Atmosphere

Chemical composition

| Element | Weight % |
|---------|--------------|
| C | 0.02% |
| Si | 0.55% |
| Mn | 0.87% |
| P max. | 0.04% |
| S max. | 0.005% |
| Cr | 21 - 23% |
| Ni | 4.50 - 6.50% |
| Mo | 2.50 - 3.50% |
| N | 0.10 - 0.22% |

Mechanical properties

| Diameter (mm) | Tolerance (mm) | Tensile strength (N/mm ²) |
|---------------|----------------|---------------------------------------|
|---------------|----------------|---------------------------------------|

| | | |
|-------------|-------------|-------------|
| 1.00 - 1.25 | ± 0.012 | 1800 - 2070 |
| 1.26 - 1.50 | ± 0.012 | 1700 - 1960 |
| 1.51 - 1.75 | ± 0.012 | 1700 - 1960 |
| 1.76 - 2.00 | ± 0.012 | 1700 - 1960 |
| 2.01 - 2.50 | ± 0.015 | 1550 - 1790 |
| 2.51 - 3.00 | ± 0.015 | 1550 - 1790 |
| 3.01 - 3.50 | ± 0.015 | 1550 - 1790 |
| 3.51 - 4.25 | ± 0.020 | 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 ⁻⁶ | 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 ² in drawn condition. | Abt. 210 kN/mm ² after heat treatment. |
| G modulus of shear | Abt. 75 kN/mm ² at 20°C | |
| Density | 7.80 kg/dm ³ | |

Steel grades and product standards

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