

# 1.4541

## Austenitic stainless steel · Material no. 1.4541

1.4541 (321) is a titanium-stabilised austenitic stainless steel – intergranular-resistant even at higher temperatures, without molybdenum.

|                               |                                          |                                           |                                                                                                             |
|-------------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>1.4541</b><br>MATERIAL NO. | <b>≥ 200 MPa</b><br>YIELD STRENGTH RP0.2 | <b>500–720 MPa</b><br>TENSILE STRENGTH RM | <b>intergranular-<br/>resistant to ~400<br/>°C · scaling-<br/>resistant to ~800<br/>°C</b><br>SERVICE TEMP. |
|-------------------------------|------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|

## Application

- Exhaust and heat-exchanger construction
- Chemical and process plants at higher temperatures
- Welded apparatus and piping

## Chemical composition (typical, wt.-%, per EN)

| Element | Content (%) |
|---------|-------------|
| C       | ≤ 0.08      |
| Si      | ≤ 1.00      |
| Mn      | ≤ 2.00      |
| Cr      | 17.0–19.0   |
| Ni      | 9.0–12.0    |
| Ti      | 5×C–0.70    |

## Mechanical properties (typical at RT, per EN)

| Property             | Value       |
|----------------------|-------------|
| Yield strength Rp0.2 | ≥ 200 MPa   |
| Tensile strength Rm  | 500–720 MPa |
| Elongation A         | ≥ 40 %      |

## Standards & supply

| Topic                | Detail                                                                        |
|----------------------|-------------------------------------------------------------------------------|
| Standards            | EN 10216-5, EN 10088                                                          |
| ASME/ASTM equivalent | ~ AISI 321                                                                    |
| Short name / aka     | X6CrNiTi18-10 · AISI 321                                                      |
| Product forms        | Pipes, flanges, fittings – seamless/welded, EN 10204 3.1/3.2 mill certificate |

**ROHRLINE** · Gewerbering 19/1/6, 3484 Grafenwörth, Austria · +43 (0) 664 1203063 · [office@rohrline.at](mailto:office@rohrline.at) · [rohrline.at/en/werkstoff-1.4541.html](https://rohrline.at/en/werkstoff-1.4541.html)

All data are typical values per the relevant EN standards for first orientation – without warranty. The applicable standard and the mill certificate of the delivery are decisive.