

Brand name | 17-7 PH®

| Standards | Material No. | EN Designation | AISI/SAE | UNS |
|-----------|--------------|----------------|----------|--------|
| | 1.4568 | X7CrNiAl17-7 | 631 | S17700 |

Description | 1.4564 / 17-7PH® is an austenitic chromium-nickel stainless steel with aluminum addition.

Special properties | Excellent fatigue properties, good corrosion resistance, good formability and minimum distortion upon heat treatment. It is easily formed in the annealed condition, hardened to high strength levels by heat treatments to condition CH900, RH950 or TH1050. The exceptional high strength of condition CH900 offers many new advantages where limited ductility and workability are permissible. In its heat treated condition, this alloy provides exceptional mechanical properties at temperatures up to 480 °C.




| Chemical Composition | C % | Si ≤ % | Mn ≤ % | P ≤ % | S ≤ % |
|----------------------|-----------|-----------|-----------|-------|-------|
| | ≤ 0.09 | 0.70 | 1.00 | 0.04 | 0.015 |
| | Cr % | Ni % | Al % | | |
| | 16.0-18.0 | 6.50-7.80 | 0.70-1.50 | | |

| Mechanical Properties 20°C | Hardness HB 30 ≤ HB | 0.2% Yield strength R _p ≥ N/mm ² | Tensile strength R _m N/mm ² | Elongation A ₅ ≥ % | Modulus of elasticity kN/mm ² |
|----------------------------|---------------------|--------------------------------------------------------|---------------------------------------------------|-------------------------------|------------------------------------------|
| | 230 | 280 | 900-1100 | 35 | 200 |

| Physical Properties 20°C | Density g/cm ³ | Specific heat capacity J/kg K | Thermal conductivity W/m K | Electrical resistivity Ω mm ² /m |
|--------------------------|---------------------------|-------------------------------|----------------------------|---------------------------------------------|
| | 7.81 | 500 | 16 | 0.8 |

Suitable welding filler materials | 1.4564

Application | Aircraft industry, high strenght corrosion resistant parts

| Available forms for 1.4568 / 17-7 PH® | Sheets/Plates | Bars | Wire |
|---------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
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