

material no.: 2.4668
 UNS no.: N07718
 designation: Alloy 718

CHEMICAL REQUIREMENTS IN (%)

| | ASTM B637 | DIN EN 10302 | API 6A718 |
|----------|-------------|---------------|-------------|
| C | max. 0,08 | 0,020 - 0,08 | max. 0,045 |
| Mn, max. | 0,35 | 0,35 | 0,35 |
| Si, max. | 0,35 | 0,35 | 0,35 |
| P, max. | 0,015 | 0,015 | 0,010 |
| S, max. | 0,015 | 0,015 | 0,010 |
| Cr | 17,0 - 21,0 | 17,0 - 21,0 | 17,0 - 21,0 |
| Co, max. | 1,0 | 1,00 | 1,00 |
| Mo | 2,80 - 3,30 | 2,80 - 3,3 | 2,80 - 3,30 |
| Nb + Ta | 4,75 - 5,50 | 4,7 - 5,5 | 4,87 - 5,20 |
| Ti | 0,65 - 1,15 | 0,60 - 1,20 | 0,80 - 1,15 |
| Al | 0,20 - 0,80 | 0,30 - 0,70 | 0,40 - 0,60 |
| B | max. 0,006 | 0,002 - 0,006 | max. 0,0060 |
| Fe | Bal. | Bal. | Bal. |
| Cu, max. | 0,30 | 0,30 | 0,23 |
| Ni | 50,0 - 55,0 | 50,0 - 55,0 | 50,0 - 55,0 |
| Pb, max. | | | 0,0010 |
| Se, max. | | | 0,0005 |
| Bi, max. | | | 0,00005 |
| Ca, max. | | | *0,0030 |
| Mg, max. | | | *0,0060 |

*to be determined if intentionally added

MECHANICAL PROPERTIES

| | solution annealed + precipitation hardened | bar / forging | bar / forging | bar / forging | |
|-------------------------|---|---------------|---------------|--------------------|--------------|
| | | D ≤ 160 mm | D < 76 mm | 76 mm ≤ D ≤ 254 mm | D > 254 mm |
| R _m (MPa) | ≥ 1275 | ≥ 1230 | ≥ 1034 | | |
| R _{p0,2} (MPa) | ≥ 1034 | ≥ 1030 | 827 - 1000 | | |
| A (%) | ≥ 12 | ≥ 12 | ≥ 20 | | |
| Z (%) | ≥ 15 | | ≥ 35 | ≥ 35 | ≥ 25 |
| Av (J) at -60 °C | | | l ≥ 68 (61)* | q ≥ 47 (41)* | q ≥ 41 (37)* |
| lateral expansion (mm) | | | ≥ 0,38 | | |
| hardness (HB) | ≥ 331 | | 32 - 40 HRC | | |

*individual value

All information are supplied without liability.