

AMS 5599, AMS 5869, NICKEL ALLOY 625 SHEET & PLATE

Alloy 625 - AMS 5599, AMS 5869 (alternatively known by Special Metals trade name Inconel 625) is a nickel chromium alloy used for its high strength, excellent fabricability and very good corrosion resistance. Excellent creep and rupture strength make it a good choice for high temperature applications, while exceptional fatigue resistance widens its uses. Alloy 625 is extensively used in the marine industry as well as chemical, motorsport, nuclear and aerospace applications.

| Specific Gravity | | | | | | | | | | | | | |
|---|-----|----|----|----|-------|------|------------------------|------------|-------------------|-------|----------|------|-----|
| 8.44 g/cm3 | | | | | | | | | | | | | |
| Typical Applications | | | | | | | Related Specifications | | | | | | |
| Motor racing exhaust systems | | | | | | | AMS 5599 | | | | | | |
| Chemical Processing | | | | | | | AMS 5599 DDQ | | | | | | |
| Aerospace equipment | | | | | | | AMS 5869 | | | | | | |
| Jet Engine exhaust systems | | | | | | | AMS 5879 LCF | | | | | | |
| Chimney Linings | | | | | | | ASTM B443 | | | | | | |
| Nuclear waste reprocessing equipment | | | | | | | ASME SB 443 | | | | | | |
| Sour gas production tubes | | | | | | | BS 3075 NA21 | | | | | | |
| | | | | | | | DIN 17750 | | | | | | |
| Chemical Composition (Wt %) | | | | | | | | | | | | | |
| | Ni | Cr | Fe | Mo | Nb+Ta | C | Mn | Si | Ph | S | Al | Ti | Co |
| Min | Bal | 20 | – | 8 | 3.15 | – | – | – | – | – | – | – | – |
| Max | – | 23 | 5 | 10 | 4.15 | 0.10 | 0.50 | 0.50 | 0.015 | 0.015 | 0.40 | 0.40 | 1.0 |
| Mechanical Properties in annealed condition | | | | | | | | | | | | | |
| 0.2% Proof Stress | | | | | | | Tensile Strength | Elongation | Reduction of area | | Hardness | | |
| MPA | | | | | | | MPA | % | % | | HRB | | |
| Min | | | | | | | Min | Min | Min | | Min | | |
| | | | | | | | | | | | | | |

| | | | | |
|-----|-----|----|----|-----|
| 414 | 827 | 30 | 40 | 145 |
|-----|-----|----|----|-----|

* This data has been supplied in good faith and is indicative only. It has been provided for general information purposes only and is not to be relied upon in place of the full specification. Mechanical properties can vary considerably with different supply conditions such as heat treatment or temper and product dimensions.

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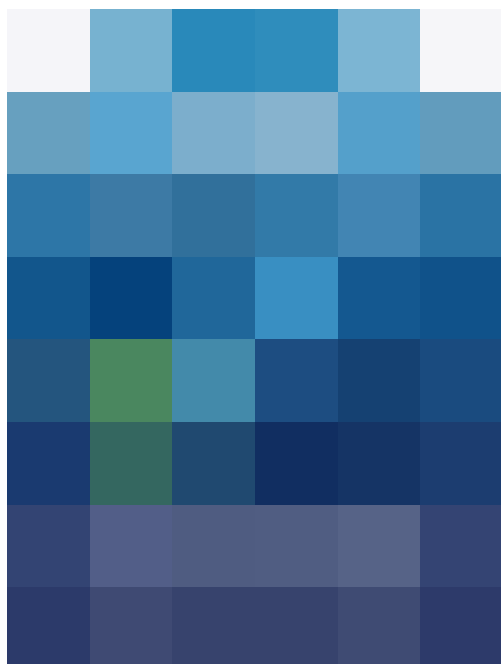
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