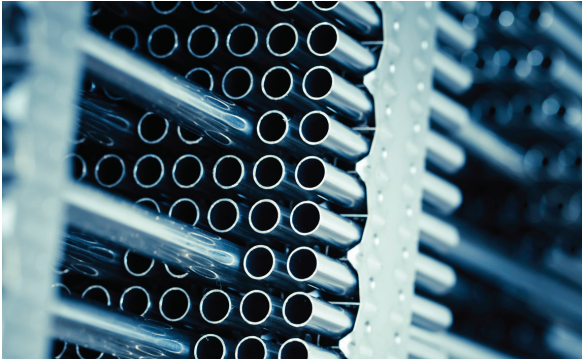


# ALLOY 625 TUBING



Alloy 625 is an austenitic nickel alloy resistant to crevice corrosion and oxidation, specifically under a wide range of temperatures from cryogenic to 1800°F. This makes the product well suited for nuclear and aerospace applications. The main feature of alloy 625 is the addition of niobium which increases the strength of the tubing without heat treating.

## PRODUCTION SPECIFICATIONS

ASME SB444/ASTM B444, NACE MR0175

## MECHANICAL PROPERTIES

|                        |              |
|------------------------|--------------|
| Yield Strength         | 60 KSI min.  |
| Tensile Strength       | 120 KSI min. |
| Elongation (min. 2in.) | 30%          |

## DIMENSIONAL TOLERANCES

| OD                 | OD Tolerance    | Wall Tolerance |
|--------------------|-----------------|----------------|
| 3/16" - 0.5", Excl | + .004"/- .000" | +/- 10%        |
| 0.5" - 1.25", Excl | + .005"/- .000" | +/- 10%        |

## SIZE RANGE

| Outside Diameter (OD) | Wall Thickness |
|-----------------------|----------------|
| 3/8" - 3/4"           | .035" - .095"  |

## ALLOY 625 (UNS N06625) CHEMICAL COMPOSITION % (MAX.)

|       |                  |             |
|-------|------------------|-------------|
| Cr    | Chromium         | 20.0 - 23.0 |
| Ni    | Nickel           | 58.0        |
| C     | Carbon           | 0.10        |
| Mo    | Molybdenum       | 8.0 - 10.0  |
| Mn    | Manganese        | 0.50        |
| Si    | Silicon          | 0.50        |
| P     | Phosphorus       | 0.015       |
| S     | Sulfur           | 0.015       |
| Fe    | Iron             | 5.0         |
| Co    | Cobalt           | 1.0         |
| Nb+Ta | Niobium-Tantalum | 3.15 - 4.15 |
| Al    | Aluminum         | 0.40        |
| Ti    | Titanium         | 0.40        |

## FABRICATION

Alloy 625 has excellent forming and welding characteristics, but is prone to work hardening.

| OD               | Wall | ID   | PSI    |
|------------------|------|------|--------|
| 3/8"<br>(.3750") | .035 | .305 | 20,160 |
|                  | .049 | .277 | 28,224 |
|                  | .065 | .245 | 37,440 |
|                  | .083 | .209 | 47,808 |
| 1/2"<br>(.5000") | .035 | .430 | 15,120 |
|                  | .049 | .402 | 21,168 |
|                  | .065 | .370 | 28,080 |
|                  | .083 | .083 | 35,856 |
| 3/4"<br>(.7500") | .095 | .560 | 27,360 |

All Pressure Ratings are approximate and for illustration purposes only.  
Values are not Guaranteed or Warranted.

## TYPICAL APPLICATIONS

Offshore  
Subsea  
Aerospace  
Nuclear  
Heat Exchangers  
Offshore Applications  
Chemical Processing

