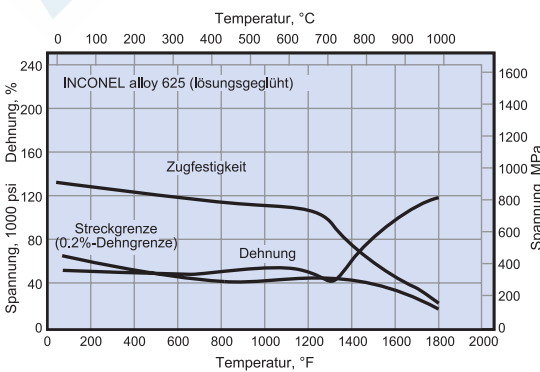
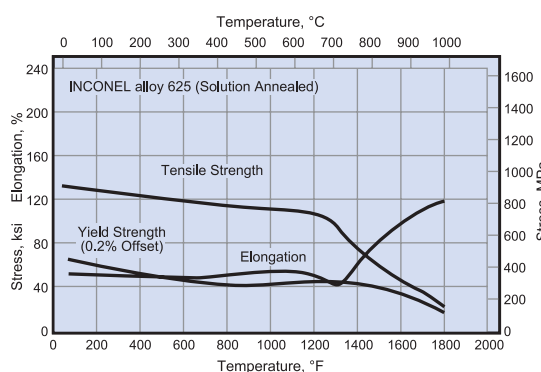


Eine Nickel-Chrom-Molybdän-Legierung mit Niobzusatz, der in der Verbindung mit dem Molybdän die Matrix verfestigt und dadurch eine hohe Festigkeit ohne verfestigende Wärmebehandlung gewährleistet. Die Legierung ist beständig gegen zahlreiche stark korrosive Medien und besonders gegen Lochfrass- und Spaltkorrosion. Verwendung in der chemischen Verfahrenstechnik, für Raumfahrt und Schiffsbau, für Umweltschutzanlagen und Atomreaktoren.

A nickel-chromium-molybdenum alloy with an addition of niobium that acts with the molybdenum to stiffen the alloy's matrix and thereby provide high strength without a strengthening heat treatment. The alloy resists a wide range of severely corrosive environments and is especially resistant to pitting and crevice corrosion. Used in chemical processing, aerospace and marine engineering, pollution-control equipment, and nuclear reactors.

| <b>Produktformen</b><br>Product Forms   | Blech, Band, Rundstab, Flachstab, Sechskantprofile, Rohr, Draht, Schmiedematerial, Strangpressprofile  | Sheet, Plate, Strip, Round Bar, Flat Bar, Hexagon, Tube, Pipe, Wire, Extruded Section, Forging Stock  |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
|---|--|---|-----|-----|----------------|------|-----|----------------|------|-----|----------------|-----|----|----------------|-----|----|---|---------------------------|-----|-----|----------------|------|-----|----------------|------|-----|----------------|-----|----|----------------|-----|----|
| <b>Normen und Bezeichnungen</b><br><br><b>Major Specifications</b>  | UNS N06625<br>ASTM B 366, B 443, B 444, B 446, B 564, B 704, B 705, B 751, B 775, B 829<br>ASME SB-366, SB-443, SB-444, SB-446, SB-564, SB-704, SB-705, SB-751, SB-775, SB-829<br>ASME Code Cases 1409, 1935   | SAE AMS 5581, 5599, 5666, 5837, 5869, MAM 5599<br>BS 3072, 3074, 3076 (NA21)<br>DIN 17744, 17750 - 17752<br>W-Nr.: 2.4856<br>NACE MR-01-75<br>VdTÜV 499<br>EN 10095<br>ISO 6207, 6208, 9723 - 9725  |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| <b>Chem. Zusammensetzung</b><br>Chemical Composition, %   | <b>Grenzwerte</b><br>Ni ..... min. 58.0    Fe .... max. 5.00    Al ..... max. 0.40<br>Cr ... 20.0 - 23.0    C ..... max. 0.10    Ti ..... max. 0.40<br>Mo .... 8.0 - 10.0    Mn ... max. 0.50    P .... max. 0.015<br>Nb <sup>a</sup> .... 3.15 - 4.15    Si ..... max. 0.50    Co <sup>b</sup> ... max. 1.00<br>S ..... max. 0.015  | <b>Limiting</b><br>Ni ..... min. 58.0    Fe .... max. 5.00    Al ..... max. 0.40<br>Cr ... 20.0 - 23.0    C ..... max. 0.10    Ti ..... max. 0.40<br>Mo .... 8.0 - 10.0    Mn ... max. 0.50    P .... max. 0.015<br>Nb <sup>a</sup> .... 3.15 - 4.15    Si ..... max. 0.50    Co <sup>b</sup> ... max. 1.00<br>S ..... max. 0.015   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| <b>Physikalische und thermische Eigenschaften</b><br><br><b>Physical Constants and Thermal Properties</b> | <b>Dichte,</b> lb/in <sup>3</sup> ..... 0.305<br>g/cm <sup>3</sup> ..... 8.44<br><b>Schmelzbereich,</b> °F ..... 2350 - 2460<br>°C ..... 1290 - 1350<br><b>Spezifische Wärme,</b> Btu/lb•°F ..... 0.098<br>J/kg•°C ..... 410<br><b>Curie-Temperatur,</b> °F ..... <-320<br>°C ..... <-196<br><b>Permeabilität bei 200 Oe (15.9 kA/m)</b> ..... 1.0006<br><b>Ausdehnungsbeiwert,</b> 70 - 200°F, 10 <sup>-6</sup> in/in•°F ..... 7.1<br>21 - 93°C, µm/m•°C ..... 12.8<br><b>Wärmeleitfähigkeit,</b> Btu • in/ft <sup>2</sup> •h•°F ..... 68<br>W/m•°C ..... 9.8<br><b>Spez. elektr. Widerstand,</b> ohm•circ mil/ft ..... 776 | <b>Density,</b> lb/in <sup>3</sup> ..... 0.305<br>g/cm <sup>3</sup> ..... 8.44<br><b>Melting Range,</b> °F ..... 2350 - 2460<br>°C ..... 1290 - 1350<br><b>Specific Heat,</b> Btu/lb•°F ..... 0.098<br>J/kg•°C ..... 410<br><b>Curie Temperature,</b> °F ..... <-320<br>°C ..... <-196<br><b>Permeability at 200 Oersted (15.9 kA/m)</b> ..... 1.0006<br><b>Coefficient of Expansion,</b> 70 - 200°F, 10 <sup>-6</sup> in/in•°F ..... 7.1<br>21 - 93°C, µm/m•°C ..... 12.8<br><b>Thermal Conductivity,</b> Btu • in/ft <sup>2</sup> •h•°F ..... 68<br>W/m•°C ..... 9.8<br><b>Electrical Resistivity,</b> ohm•circ mil/ft ..... 776<br>µohm•m ..... 1.29 |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| <b>Typische mechanische Eigenschaften</b><br><br><b>Typical Mechanical Properties</b>                     | <b>(Lösungsgeglüht)</b><br><table border="1"><thead><tr><th>Zeitstandfestigkeit (1000 Std)</th><th>ksi</th><th>MPa</th></tr></thead><tbody><tr><td>1200°F / 650°C</td><td>52.0</td><td>360</td></tr><tr><td>1400°F / 760°C</td><td>23.0</td><td>160</td></tr><tr><td>1600°F / 870°C</td><td>7.2</td><td>50</td></tr><tr><td>1800°F / 980°C</td><td>2.6</td><td>18</td></tr></tbody></table><br>   | Zeitstandfestigkeit (1000 Std)  | ksi | MPa | 1200°F / 650°C | 52.0 | 360 | 1400°F / 760°C | 23.0 | 160 | 1600°F / 870°C | 7.2 | 50 | 1800°F / 980°C | 2.6 | 18 | <b>(Solution Annealed)</b><br><table border="1"><thead><tr><th>Rupture Strength (1000 h)</th><th>ksi</th><th>MPa</th></tr></thead><tbody><tr><td>1200°F / 650°C</td><td>52.0</td><td>360</td></tr><tr><td>1400°F / 760°C</td><td>23.0</td><td>160</td></tr><tr><td>1600°F / 870°C</td><td>7.2</td><td>50</td></tr><tr><td>1800°F / 980°C</td><td>2.6</td><td>18</td></tr></tbody></table><br> | Rupture Strength (1000 h) | ksi | MPa | 1200°F / 650°C | 52.0 | 360 | 1400°F / 760°C | 23.0 | 160 | 1600°F / 870°C | 7.2 | 50 | 1800°F / 980°C | 2.6 | 18 |
| Zeitstandfestigkeit (1000 Std)  | ksi  | MPa   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1200°F / 650°C  | 52.0   | 360   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1400°F / 760°C  | 23.0   | 160   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1600°F / 870°C  | 7.2  | 50  |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1800°F / 980°C  | 2.6  | 18  |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| Rupture Strength (1000 h)   | ksi  | MPa   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1200°F / 650°C  | 52.0   | 360   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1400°F / 760°C  | 23.0   | 160   |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1600°F / 870°C  | 7.2  | 50  |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |
| 1800°F / 980°C  | 2.6  | 18  |     |     |                |      |     |                |      |     |                |     |    |                |     |    |   |                           |     |     |                |      |     |                |      |     |                |     |    |                |     |    |

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