

Eine Nickel-Chrom-Kobalt-Molybdän-Legierung mit ausgezeichneter Kombination von Gefügestabilität, Festigkeit und Oxydationsbeständigkeit bei hohen Temperaturen. Die Oxydationsbeständigkeit wird durch Aluminiumzusatz noch erhöht. Die Legierung ist auch gegen viele korrosive, wässrige Medien beständig. Verwendung in Gasturbinen für Brennkammern, Leitungen und Auskleidungen, für petrochemische Verfahrenstechnik, für Wärmebehandlungsanlagen sowie bei der Herstellung von Salpetersäure.

A nickel-chromium-cobalt-molybdenum alloy with an exceptional combination of metallurgical stability, strength, and oxidation resistance at high temperatures. Resistance to oxidation is enhanced by an aluminum addition. The alloy also resists a wide range of corrosive aqueous environments. Used in gas turbines for combustion cans, ducting, and transition liners; for petrochemical processing; for heat-treating equipment; and in nitric acid production.

| Produktformen Product Forms | Blech, Band, Rundstab, Flachstab, Sechskantprofile, Rohr, Draht, Schmiedestücke, Strangpressprofile | Sheet, Plate, Strip, Round Bar, Flat Bar, Hexagon, Tube, Pipe, Wire, Extruded Section, Forging Stock | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|-----|-----|----------------|------|-----|----------------|------|-----|----------------|-----|----|----------------|-----|----|-----------------|-----|----|--|---------------------------|-----|-----|----------------|------|-----|----------------|------|-----|----------------|-----|----|----------------|-----|----|-----------------|-----|----|
| Normen und Bezeichnungen Major Specifications | UNS N06617 ASTM B 166, B 168, B 546, B 564 ASME SB-166, SB-168, SB-546, SB-564 SAE AMS 5887 - 5889 | ASME Code Cases 1956, 1982 W-Nr.: 2.4663 VdTÜV 485 ISO 6207, 6208, 9724 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chem. Zusammensetzung Chemical Composition, % | Grenzwerte Ni min. 44.5 C 0.05 - 0.15 Ti max. 0.6 Cr ... 20.0 - 24.0 Fe max. 3.0 Cu max. 0.5 Co ... 10.0 - 15.0 Mn max. 1.0 B max. 0.006 Mo 8.0 - 10.0 Si max. 1.0 Al 0.8 - 1.5 S max. 0.015 | Limiting Ni min. 44.5 C 0.05 - 0.15 Ti max. 0.6 Cr ... 20.0 - 24.0 Fe max. 3.0 Cu max. 0.5 Co ... 10.0 - 15.0 Mn max. 1.0 B max. 0.006 Mo 8.0 - 10.0 Si max. 1.0 Al 0.8 - 1.5 S max. 0.015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Physikalische und thermische Eigenschaften Physical Constants and Thermal Properties | Dichte, lb/in ³ 0.302 g/cm ³ 8.36 Schmelzbereich, °F 2430 - 2510 °C 1330 - 1380 Spezifische Wärme, Btu/lb•°F 0.100 J/kg•°C 419 Ausdehnungsbeiwert, 78 - 200°F, 10 ⁻⁶ in/in•°F 6.4 20 - 100°C, µm/m•°C 11.6 Wärmeleitfähigkeit, Btu • in/ft ² •h•°F 94 W/m•°C 13.6 Spez. elektr. Widerstand, ohm•circ mil/ft 736 µohm•m 1.22 | Density, lb/in ³ 0.302 g/cm ³ 8.36 Melting Range, °F 2430 - 2510 °C 1330 - 1380 Specific Heat, Btu/lb•°F 0.100 J/kg•°C 419 Coefficient of Expansion, 78 - 200°F, 10 ⁻⁶ in/in•°F 6.4 20 - 100°C, µm/m•°C 11.6 Thermal Conductivity, Btu • in/ft ² •h•°F 94 W/m•°C 13.6 Electrical Resistivity, ohm•circ mil/ft 736 µohm•m 1.22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Typische mechanische Eigenschaften Typical Mechanical Properties | (Lösungsgeglüht) <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>47.0</td> <td>320</td> </tr> <tr> <td>1400°F / 760°C</td> <td>22.0</td> <td>150</td> </tr> <tr> <td>1600°F / 870°C</td> <td>8.4</td> <td>58</td> </tr> <tr> <td>1800°F / 980°C</td> <td>3.6</td> <td>25</td> </tr> <tr> <td>2000°F / 1095°C</td> <td>1.5</td> <td>10</td> </tr> </tbody> </table> | Zeitstandfestigkeit (1000 Std) | ksi | MPa | 1200°F / 650°C | 47.0 | 320 | 1400°F / 760°C | 22.0 | 150 | 1600°F / 870°C | 8.4 | 58 | 1800°F / 980°C | 3.6 | 25 | 2000°F / 1095°C | 1.5 | 10 | (Solution Annealed) <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>47.0</td> <td>320</td> </tr> <tr> <td>1400°F / 760°C</td> <td>22.0</td> <td>150</td> </tr> <tr> <td>1600°F / 870°C</td> <td>8.4</td> <td>58</td> </tr> <tr> <td>1800°F / 980°C</td> <td>3.6</td> <td>25</td> </tr> <tr> <td>2000°F / 1095°C</td> <td>1.5</td> <td>10</td> </tr> </tbody> </table> | Rupture Strength (1000 h) | ksi | MPa | 1200°F / 650°C | 47.0 | 320 | 1400°F / 760°C | 22.0 | 150 | 1600°F / 870°C | 8.4 | 58 | 1800°F / 980°C | 3.6 | 25 | 2000°F / 1095°C | 1.5 | 10 |
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