



# NIMONIC® C-263



## Key Features

Excellent fabrication characteristics in the annealed condition

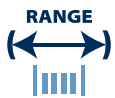
Age Hardenable

\*\*High temperature static applications

### IMPORTANT

We will manufacture to your required mechanical properties.

## key advantages to you, our customer



0.025mm to 21mm (.001" to .827")



Order 3m to 3t (10 ft to 6000 Lbs)



Delivery: within 3 weeks



Wire to your spec



E.M.S available



Technical support

### NIMONIC® C-263 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

### Packaging

- Coils
- Spools
- Bars or lengths



\*Trade name of Special Metals Group of Companies.

| Chemical Composition |       |        | Specifications   | Key Features  | Typical Applications                   |
|----------------------|-------|--------|--|---|--|
| Element              | Min % | Max %  | W.Nr. 2.4650<br>UNS N07263   | Excellent fabrication characteristics in the annealed condition<br>Age Hardenable<br>**High temperature static applications | Parts in gas turbines<br>Sealing rings |
| C                    | 0.04  | 0.08   | <b>Designations</b><br>AMS 5872<br>AMS 5886<br>BS HR 10<br>BS HR 206 |   |  |
| Si                   | -     | 0.40   |  |   |  |
| Mn                   | -     | 0.60   |  |   |  |
| S                    | -     | 0.007  |  |   |  |
| Ag                   | -     | 0.0005 |  |   |  |
| Al                   | 0.30  | 0.60   |  |   |  |
| B                    | -     | 0.005  |  |   |  |
| Bi                   | -     | 0.0001 |  |   |  |
| Co                   | 19.0  | 21.0   |  |   |  |
| Cr                   | 19.0  | 21.0   |  |   |  |
| Cu                   | -     | 0.20   |  |   |  |
| Fe                   | -     | 0.70   |  |   |  |
| Mo                   | 5.60  | 6.10   |  |   |  |
| Pb                   | -     | 0.002  |  |   |  |
| Ti                   | 1.90  | 2.40   |  |   |  |
| Ti+Al                | 2.40  | 2.80   |  |   |  |
| Ni                   | Bal   |        |  |   |  |

|                                 |                             |  |
|---------------------------------|-----------------------------|--|
| <b>Density</b>                  | 8.36 g/cm <sup>3</sup>      | 0.302 lb/in <sup>3</sup>                       |
| <b>Melting Point</b>            | 1325 °C                     | 2415 °F  |
| <b>Coefficient of Expansion</b> | 10.6 µm/m* °C (20 – 100 °C) | 5.7 x 10 <sup>-6</sup> in/in* °F (70 – 212 °F) |
| <b>Modulus of Elasticity</b>    | 222.5 kN/mm <sup>2</sup>    | 32270 ksi                                      |

| Heat Treatment of Finished Parts    |            |             |             |                               |                     |
|-------------------------------------|------------|-------------|-------------|-------------------------------|---------------------|
| Condition as supplied by Alloy Wire | Type       | Temperature |             | Time (Hr)                     | Cooling             |
|                                     |            | °C          | °F          |                               |                     |
| Annealed                            | Age Harden | 800         | 1475        | 8 hours                       | Air                 |
| Spring Temper                       | Anneal     | 1040 - 1165 | 1900 - 2125 | Suited to diameter<br>8 Hours | Water or Air<br>Air |
|                                     | Age Harden | 800         | 1475        |                               |                     |

| Properties                      |                          |           |   |            |
|---------------------------------|--------------------------|-----------|---|------------|
| Condition                       | Approx. tensile strength |           | Approx. operating temperature depending on load** and environment |            |
|                                 | N/mm <sup>2</sup>        | ksi       | °C  | °F         |
| Annealed                        | <1000                    | <145      | up to 800   | up to 1500 |
| Annealed + Aged                 | 1000 – 1200              | 145 – 174 | up to 800   | up to 1500 |
| Spring Temper                   | 1200 – 1500              | 174 – 217 | up to 800   | up to 1500 |
| Spring Temper + Annealed + Aged | 1000 – 1200              | 145 – 174 | up to 800   | up to 1500 |

The above tensile strength ranges are typical. If you require different please ask.

\*\*Static applications = still/fixe/motionless/rigid