

## Nimonic 263 Data Sheet

 DIN 2.4650  
 UNS N07263

 AMS 5886  
 AMS 5872

Nickel-Chromium-Cobalt-Molybdenum Alloy

Nimonic Data Sheet

### Introduction

Nimonic 263 is nickel-chromium-cobalt-molybdenum alloy specially meant for use in high temperature and high strength applications. Nimonic 263 can be precipitation hardened.

### Chemical Composition ( Typical )

Element	Limits	
	min	max
Carbon	0.040	0.080
Silicon	0.000	0.400
Manganese	0.000	0.600
Sulfur	0.000	0.007
Silver	0.000	0.0005
Aluminum	0.000	0.600
Boron	0.000	0.005
Bismuth	0.000	0.0001
Cobalt	19.000	21.000
Chromium	19.000	21.000
Copper	0.000	0.200
Iron	0.000	0.700
Molybdenum	5.600	6.110
Lead	0.000	0.002
Titanium	1.900	2.400
Aluminum and titanium	2.400	2.800
Nickel	Balance	

### Mechanical Properties ( Typical )

Parameter	Value
Yield 0.2 % (Mpa/Ksi), Min	940/136
Tensile (Mpa/Ksi), Min	550/79.8
Elongation at Break, Min, %	39

### Physical Properties ( Typical )

Parameter	Value
Density g/cm <sup>3</sup>	8.36
Melting Range °C	1300-1355
Specific Heat J/Kg °C	-

### Heat Treatment

Nimonic 263 can be solution annealed at 1149°C (2100°F) and rapidly cooled by using the water quench method. It can then be precipitation-hardened at 799°C (1470°F) for 24 h, which can be followed by air cooling.

## Working Instructions

**Hot Working** - Nimonic 263 may be hot worked in the temperature range 950-1150°C

**Annealing** - NIMONIC alloy 263 bar or heavy section is usually softened by a heat treatment namely the first stage of the recommended two stage heat treatment for bar.

**Cold working** - Nimonic 263 can be cold worked using standard tooling. It is better to avoid using plain carbon tool steels for forming as they cause galling.

**Welding** - Nimonic 263 can be welded using traditional method. Commonly used methods are Shielded metal arc-welding, gas metal arc-welding, Submerged arc-welding and gas-tungsten arc welding.

## Manufactured Product Forms

Sheet	Flanges
Plate	Fasteners
Round Bar	Filler Metal
Welding Wire	Pipe
Forgings	Tube

## Relavant Standards

BS HR 10	DIN 17752
BS HR 206	DIN 17753
BS HR 404	DIN 17754

## Certifications & other Compliance

Product manufactured under Nimonic 263 are certified in conformance to En 10204 Type 3.1 Certificate as well as 3.2 with third party inspection. Products with Nace Mr0175 compliance are also offered.

## Applications & Industries

Aerospace Industry  
High Temperature Springs  
Thermal Processing Equipments  
Industrial furnace structural parts  
Heat treatment equipments

## Related Keywords

Nimonic 263 Plates, Nimonic 263 Bars, Nimonic 263 Wire, Nimonic 263 Filler Wire, Nimonic 263 Sheet, Nimonic 263 Strip, Nimonic 263 Component Parts, Nimonic 263 Fittings, Nimonic 263 Forgings, Nimonic 263 Pipes, Nimonic 263 Tubes, Nimonic 263 Fasteners, Nimonic 263 Flanges, DIN 2.4650, UNS N07263, AMS 5886, AMS 5872.

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