UNITED PERFORMANCE METALS
QUALITY SOLUTIONS. TRUSTED PARTNERS.
AN ONI COMPANY

Alloy C263
AMS 5872

Alloy C263 - Nimonic 263® is an age-hardenable nickel-cobalt chromium-molybdenum alloy designed specifically to combine good aged strength properties with excellent fabrication characteristics in the annealed condition. While its strength at elevated temperatures is not quite as high as Waspaloy® or Rene 41, it is far easier to form or weld than these alloys. Alloy C263 plate - Nimonic 263® plate, and is. This grade is typically used for applications up to about 1650°F (900°C). This grade combines properties which make it suitable for a variety of fabricated components in both aircraft turbine engine and land-based turbine applications.

Nominal Composition %

- Ni Nickel - 52.00
- Co Cobalt - 20.00
- Cr Chromium - 20.00
- Mo Molybdenum - 6% 2.4%
- Ti Titanium - 0.6

Percent by weight, maximum unless a range is listed.

Standard Inventory Specifications

- AMS: 5872
- UNS N07623
- B50A774
- W.Nr. 2.4650

Forms Stocked

- Coil
- Sheet
- Plate

Thickness Stocked

- 0.040” - 0.125” thick - Coil
- 0.040” - 0.125” thick - Sheet
- 0.1875” - Plate

Applications

- Low temperature combustors
- Transition liners
- Ring components

Call 1.888.282.3292

Or click here to view our product page and request a quote on alloy C263

Features

- Exhibits excellent intermediate temperature tensile ductility
- Not normally subject to strain age cracking problems common for other gamma prime strengthened alloys

Physical Properties

Alloy C263 is non-magnetic, has high strength up to 1500°F (816°C) and good oxidation resistance up to 1800°F (982°C). Alloy C263 has excellent ductility and may be formed by cold working.

Properties	Value
Density	0.302 lb/in^3 (8.36 g/cm^3)

Mechanical Properties

Properties of 422 stainless	Value
Hardness	Typically 200 BHN. Grain structure is austenitic at both cryogenic and elevated temperatures.
Typical stock removal rate	20 surface feet/minute with high speed tools. 80 surface feet/minute with carbide.
Care	Care must be taken to ensure a rigid machine setup and sharp tools, so that work hardening and surface glazing do not occur.
Alloy C263 Plate	Plate has excellent welding characteristics and can be welded by most customary techniques, such as inert gas tungsten arc (TIG), gas metal arc welding (GMAW), electron beam and resistance welding. Oxyacetylene and submerged arc processes are not recommended. Avoid excessive heat input when welding and when a filler metal is required a matching C-263 filler metal should be used. This grade is typically used in the fully aged condition. Following forming and welding, a full solution anneal prior to aging is often employed to develop optimum properties.