

# Alloy 86

A nickel-chromium-molybdenum grade with the addition of cerium, Alloy 86 can be used up to 1050°C.

Alloy 86 is an alloy produced for its superb workability, weldability and ductility. This alloy has excellent oxidation and scaling resistance up to 1050°C.

## PRODUCT FORMS

PRODUCT FORM	SIZE RANGE FROM	SIZE RANGE TO
Alloy 86 round bar	20 mm	140 mm
Alloy 86 sheet & plate	1.5 mm	2 mm

Can't find the size you need? **Please contact us at [onlinesales@neonickel.com](mailto:onlinesales@neonickel.com)**

## CHEMICAL ANALYSIS

%	NI	CR	MO	C	CE
Min	65	25	10	0	0
Max	0	0	0	0.05	0.03

## APPLICATIONS

- Gas turbinefabricated components
- Industrial furnaces
- Combustion chambers
- After burners

## ABOUT ALLOY 86

With the addition of cerium, Alloy 86 demonstrates good formability, ductility, and weldability. In addition, the alloy exhibits exceptional oxidation resistance and scaling at temperatures up to 1050°C. As a result of its ease of fabrication, Alloy 86 is commonly used for sheet metal fabrications in the aerospace and gas turbine markets. For more information on Alloy 86 [contact us](#), or alternatively get a quick quote by filling in our online quote form!

**PROPERTIES**

<b>Density:</b>	8.54 g/cm <sup>3</sup>
<b>Melting Range:</b>	°C
<b>Hardness:</b>	HRB
<b>Specific Heat Capacity:</b>	J/kg.°C
<b>Electrical Resistivity:</b>	μΩ.m
<b>Curie Temperature:</b>	°C

**MECHANICAL & PHYSICAL PROPERTIES**

MECHANICAL & PHYSICAL PROPERTIES	21.1°C	93.3°C	204.4°C	315.6°C	371.1°C	537.8°C	648.9°C	700°C	815°C	850°C	870°C	925°C	982°C
Ultimate Tensile Strength /MPa	825	-	-	692	-	661	-	557	-	319	-	-	-
0.2% Yield Strength /MPa	410	-	-	251	-	242	-	239	-	173	-	-	-
Elongation %	42	-	-	49	-	54	-	56	-	69	-	-	-
1,000 hr Rupture Strength	-	-	-	-	-	-	-	-	80	-	50	28	18
Coefficient of Thermal Expansion /μm/m°C	-	12.7	12.8	13.1	13.5	13.9	14.1	-	-	-	-	-	16.8
Thermal Conductivity /kcal/(hr.m.°C)	210	206	201	195	189	183	176	-	-	-	-	-	138

**SPECIFICATIONS**

<b>Standards:</b>	MSRR 7141, BS HR100
-------------------	---------------------