



MgO insulation — high purity

	%
MgO	99.500
CaO	0.320
Fe ₂ O ₃	0.070
Al ₂ O ₃	0.100
C	0.002

Sheath materials

Inconel600

Applications: Construction of (nuclear) power plants, PWR, furnace construction, fiber production, synthetic material production, paper industry, food processing, steam boilers, column stills, jet and rocket engines.

Max. continuous temperature: 1150°C

Heat resistance: Excellent high temperature strength and resistance.

Corrosion resistance: Good resistance to general corrosion and stress-corrosion cracking, and good high temperature strength and resistance to oxidation. Limit for use in carbon dioxide is approx. 500°C, in liquid sodium approx. 750°C, in sulphur containing atmosphere approx. 550°C and in water free of chloride approx. 600°C.

Welding: Suitable for all standard welding methods.

Inc600	%
C	0.010
Mn	0.200
P	0.010
S	0.002
Si	0.490
Cr	15.190
Ni	75.510
Mo	0.000
Fe	8.300
Cu	0.180
Co	0.100

310

Applications: Nuclear power plants, crude oil and petrochemistry, furnace construction, heat exchangers, air heaters, cement and brick kilns, glass works, jet engine afterburner and gas inlet temperature measuring applications.

Max. continuous temperature: 1150°C

Heat resistance: Good resistance to oxidation in intermittent service in air at temperatures up to 1150°C in continuous service. Good resistance to thermal fatigue and cyclic heating. Widely used where sulphur dioxide gas is encountered at elevated temperatures. Continuous use in 425 to 850°C range not recommended but often performs well in temperatures above and below this range.

Corrosion resistance: Excellent resistance at normal temperatures and when in high temperature service exhibits good resistance to oxidation and carburizing atmospheres up to 900°C. Resists fuming nitric acid at room temperature and fused nitrates up to 420°C. **Welding:** Good characteristics suited to all standard welding methods.

310	%
C	0.019
Mn	1.000
P	0.019
S	0.001
Si	0.650
Cr	24.510
Ni	19.450
Mo	0.270
Fe	53.850
Cu	0.180
Co	0.050

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316

Applications: Chemical instrument construction, nuclear power plants, reactor instrumentation, furnace construction, sulphite, chemical pulp, textile, dye, fatty acid, photochemical and pharmaceutical industries.

Max. continuous temperature: 925°C

Heat resistance: Good oxidation resistance in intermittent service to 800°C and in continuous service to 925°C.

Corrosion resistance: Good resistance to a wide range of chemicals. Highly resistant to complex sulphur compounds used in pulp and paper processing. Also resists attack of marine and corrosive industrial atmospheres.

Welding: Good characteristics suited to all standard welding methods.

316	%
C	0.015
Mn	0.630
P	0.034
S	0.002
Si	0.340
Cr	16.200
Ni	12.210
Mo	2.070
Fe	68.480

321

Applications: Nuclear power plants, reactor instrumentation, construction of chemical instruments, such as production of acetyl acid and nitric acids, heat exchangers, annealing furnaces, paper and textile industry, crude oil refinement and petrochemistry, fat and soap industry, food processing, dairy and fermentation works.

Max. continuous temperature: 900°C

Heat resistance: Good oxidation resistance in intermittent service to 800°C and in continuous service to 900°C. Resistant to carbon dioxide up to 650°C.

Corrosion resistance: Excellent resistance to aggressive environments such as hot crude oil products, steam and combustion gases.

Welding: Suitable for all standard welding methods.

321	%
C	0.040
Mn	0.650
P	0.031
S	0.003
Si	0.410
Cr	17.370
Ni	8.340
Ti	0.300
Fe	72.856

304

Applications: Nuclear power plants, chemical equipment, textile and paper industry, fat, soap and nitric acid industries, food processing, dairy and brewery works.

Max. continuous temperature: 900°C

Heat resistance: Good oxidation resistance in intermittent service to 870°C and continuous service to 900°C. Continuous use of 304 in 425 to 850°C range not recommended but often performs well in temperatures fluctuating above and below this range

Corrosion resistance: Excellent in a wide variety of corrosive media including hot petroleum products and steam combustion gases.

Welding: Suitable for all standard welding methods.

304	%
C	0.060
Mn	2.000
P	0.035
S	0.030
Si	1.000
Cr	17.500
Ni	8.100
Fe	71.280

Nicrobell®

Applications: Nuclear power plants, heat exchangers, carburizing equipment, heating elements, vacuum furnaces and flues.

Max. continuous temperature: 1300°C

Heat resistance: Extended high temperature strength and resistance.

Corrosion resistance: Excellent oxidation resistance, generally superior to stainless steels. Suitable for use in reducing, oxidizing and vacuum atmospheres. Can be used in sulphurous atmospheres at reduced temperatures.

Welding: Suitable for all standard welding methods.

Nicrobell	%
C	0.050
Mg	0.150
Cr	23.0-25.0
Ni	72.2-74.2
Si	1.400
Nb	0.500
Co	0.300
Mo	0.100
Fe	0.300

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Incoloy800

Applications: Nuclear power plants, heat exchangers, carburizing equipment, heating elements.

Max. continuous temperature: 1100°C

Heat resistance: Good general high temperature strength and resistance.

Corrosion resistance: Good elevated temperature resistance to oxidation, carburization and nitrogenisation. Good sulphur and corrosion resistance.

Welding: Suitable for all standard welding methods.

Inc800	%
C	0.057
Mn	1.030
P	0.008
S	0.001
Si	0.360
Cr	20.340
Ni	30.290
Ti	0.170
Fe	47.324
Cu	0.230
Al	0.190

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