WIRE CLOTH

SPECIALTY ALLOYS FOR WIRE CLOTH

Direct Metals manufactures wire cloth from a variety of metals and alloys, depending on our customers’ specific needs. The environment in which the wire cloth will be used is usually the most important factor in determining the material to be used.

For example, certain alloys can provide resistance to corrosive or oxidating environments, while others offer enhanced strength, abrasion resistance or the ability to withstand extreme temperatures. The color or appearance of the wire cloth is still another consideration when it is used for architectural or other design purposes.

Direct Metals has many of these materials available from stock. The following descriptions provide a general guideline to their most important features. Our engineering staff provides expert design assistance to ensure the most suitable materials are chosen.

Other metals and alloys may be available on request.

CORROSION-RESISTANT ALLOYS

CARPENTER® 20Cb-3®
[(UNS N08020) Ni 35%, Fe 37%, Cr 20%, Cu 3.5%, Mo 2.5%]
Provides outstanding resistance to stress-corrosion cracking, crevice corrosion, intergranular attack and pitting. Because of its strong resistance to chlorides and sulfuric, phosphoric and nitric acids, it has broad application across many industries including pharmaceutical production, pickling tanks, synthetic rubber, gas scrubbers and pumps.

HASTELLOY® alloy B-2
[(UNS N10655) Ni 68%, Mo 28%, Fe 2%, Co 1%, Cr 1%]
Offers superior resistance to a wide range of organic acids, as well as hydrochloric acid, sulfuric acid and aluminum chloride. Resists stress-corrosion cracking. Favored by the chemical processing industry, it can function in temperatures ranging from ambient to 1500°F.

HASTELLOY® alloy C-276
[(UNS N10276) Ni 57%, Mo 16%, Cr 15.5%, Fe 5.5%]
Particularly suitable for use in corrosive environments where reducing and oxidizing are common. Resists localized attack, pitting and stress corrosion cracking. In wide use in the pulp and paper industries, as well as pollution control and chemical processing.

INCONEL® alloy 600
[(UNS N06600) Ni 76.0%, Cr 15.5%, Fe 8.0%]
Ideal for use in high-temperature environments (up to 2150°F.) that also pose the threat of oxidizing, reducing and corrosion. Offers superior resistance due to its high nickel and chromium content. Because of these properties, it is often specified for nuclear steam generator equipment, heat treating equipment and furnace muffles. Also used for electronic components and chemical and food processing.

MONEL® alloy 400
[(UNS N04400) Ni 66.5%, Cu 31.5%]
An extremely versatile alloy, used in a wide range of applications including electrical and electronic components, water heaters and heat exchangers, processing equipment, the petroleum industry, marine fixtures, and valves and pumps. Suitable for use across a wide range of temperatures and conditions, it offers excellent corrosion resistance, high strength and easy weldability.

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Nickel 200/201
[[UNS N02200/N02201] Ni 99.6%, C 0.08%]
Well-suited to operating temperatures over 600°F, this commercially pure nickel product will resist a wide range of corrosives. Because of its excellent mechanical characteristics, it has wide application in the electronic and aerospace industries. Also suitable for chemical and caustic handling equipment and piping, magnetostrictive devices and food processing equipment.

Carpenter 20 is a registered trademark name of Carpenter Technology Corp.
Hastelloy B and Hastelloy C are registered trademark names of Haynes International, Inc.
Inconel 600 and Monel 400 are registered trademark names of Inco Companies

HEAT-RESISTANT ALLOYS

HASTELLOYS® alloy X (HX)
[[UNS N06002] Ni 47.5%, Cr 21.8%, Fe 18.5%, Ni 9.0%]
Provides optimum balance of strength, oxidation resistance, welding characteristics and fabricability, at temperatures up to 2200°F. Particularly suitable in reducing and neutral atmospheres, and where ductility is required after prolonged service at elevated temperatures. Resists stress-corrosion cracking in petrochemical applications. Used in gas turbine engine combustors, heat treating equipment, flame holders, furnace baffles, and aircraft and marine applications.

HAYNES® alloy 25 (L605)
[[UNS R30605] Co 50%, Cr 20%, W 15%, Ni 10%, Fe 3%, Mn 1.5%]
High-strength; resists oxidation and carburization up to 1900°F. Resists galling, acids and body fluids. At certain concentrations, will resist hydrochloric and nitric acid. Resistant to wet chlorine environments at room temperature. Widely used in gas turbine engine components, bearings, springs, marine environments, heart valves.

INCONEL® alloy 625
[[UNS N06625] Ni 61%, Cr 21.5%, Mo 9%, Nb+Ta 3.6%]
Retains its strength and toughness across a wide range of operating temperatures, from cryogenic through 1800°F. Outstanding fatigue strength, good oxidation and corrosion resistance. Used in nuclear reactors, ash pit seals, marine equipment, fuel nozzles, afterburners, and chemical and pollution control equipment.

INCONEL® alloy 718
[[UNS N07718] Ni 52.5%, Cr 19%, Fe 18.5%, Mo 3.0%, Nb+Ta 3.6%]
For use across temperatures ranging from -423°F. to 1300°F., with excellent oxidation resistance up to 1800°F. Found in jet engines, fuel elements, pump parts, nuclear fuel elements and hot extrusion applications.

Hastelloy X and Haynes 25 are registered trademark names of Haynes International, Inc.
Inconel 625 and Inconel 718 are registered trademark names of Inco Companies