

TECHNICAL DATA

NISTELLE™ 625 ALLOY

NISTELLE™ NICKEL-BASED ALLOYS are a family of austenitic nickel-chromium-based super alloys. Nistelle™ alloys are oxidation- and corrosion-resistant materials well suited for service in extreme environments subjected to pressure and heat. When heated, Nistelle™ forms a thick, stable, passivating oxide layer protecting the surface from further attack. Nistelle™'s high temperature strength is developed by solid solution strengthening or precipitation hardening, depending on the alloy. Nistelle™ alloys are typically used in high temperature applications.

NISTELLE™ 625 is nickel-chromium-molybdenum alloy with an addition of niobium that acts with the molybdenum to stiffen the alloy's matrix and thereby provide high strength without a strengthening heat treatment. The alloy resists a wide range of severely corrosive environments and is especially resistant to pitting and crevice corrosion. Used in chemical processing, aerospace and marine engineering, pollution-control equipment, and nuclear reactors. Widely specified for use in seawater and contaminated seawater environments. Excellent high temperature oxidation and corrosion properties.

NOMINAL CHEMICAL COMPOSITION (MASS%)

ALLOY	Ni	Cr	Mo	Nb + Ta	Fe	Others
Nistelle™ 625	Bal.	21,5	9,0	3,7	< 1,0	Co, Si, C

PHYSICAL PROPERTIES

ALLOY	Hardness	Density	Melting Range
Nistelle™ 625	200 – 250 HV	~ 8,40 g/cm ³	1290 – 1350 °C

PRODUCT FORMS

Consumables for Cladding / Hardfacing and Additive Layer Manufacturing (ALM)					
Powder	PTA Cladding	Laser Cladding	HVOF Spraying	Plasma Spraying	ALM

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