

Haynes 25 Welding Electrodes, also known as **L-605**, are high-performance cobalt-based alloy electrodes designed for superior strength, oxidation resistance, and corrosion performance in demanding service environments. Manufactured and supplied by **Metals And Welding Specialities**, these electrodes meet the highest industry standards for precision and reliability. Classified under **UNS R30605** and conforming to **ASTM F90** specifications, Haynes 25 electrodes are the trusted choice for applications that demand exceptional wear and heat resistance.



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Engineered for excellent weldability and metallurgical stability, **Haynes 25 welding electrodes** deliver a strong, ductile weld deposit even under high-temperature exposure. This cobalt-chromium-tungsten-nickel alloy offers outstanding mechanical properties up to 2000°F (1093°C), making it ideal for components exposed to extreme thermal and oxidative stress. The combination of strength and corrosion resistance makes this alloy suitable for gas turbine engine parts, combustion liners, afterburner components, and industrial furnace fixtures.



Haynes 25 Welding Electrodes, Haynes 25 Welding Electrodes Manufacturers, Haynes 25 Welding Electrodes Suppliers, Haynes 25 Welding Electrodes Stockists, Haynes 25 Welding Electrodes Exporters

At **Metals And Welding Specialities**, we supply Haynes 25 electrodes that provide smooth arc characteristics, minimal spatter, and excellent bead appearance. These electrodes are specially designed to ensure stable arc performance in both flat and out-of-position welding. When properly applied, they produce a uniform weld deposit that resists scaling, oxidation, and metal fatigue, even after prolonged service in high-stress environments.

The **UNS R30605 (Haynes 25)** alloy is known for its unique balance of properties – exceptional hot strength, outstanding oxidation resistance, and excellent forming characteristics. It maintains its integrity in both oxidizing and carburizing atmospheres, ensuring long-term performance and minimal maintenance. The **ASTM F90 Grade** designation guarantees that each electrode meets strict metallurgical standards for composition, microstructure, and performance reliability.



Haynes 25 Welding Electrodes in India, Haynes 25 Welding Electrodes Manufacturers in India, Haynes 25 Welding Electrodes Suppliers in India, Haynes 25 Welding Electrodes Stockists in India, Haynes 25 Welding Electrodes Exporters in India

Professionals across the aerospace, power generation, and petrochemical industries rely on **Metals And Welding Specialities** for consistent quality and dependable delivery of Haynes 25 electrodes. Whether you are fabricating turbine blades, welding exhaust components, or repairing heat-resistant assemblies, these electrodes deliver results that meet both structural and operational demands. Every batch is tested to ensure chemical consistency, arc stability, and adherence to global welding standards. As a trusted supplier, **Metals And Welding Specialities** is committed to providing premium cobalt-based alloys that help our clients achieve superior weld performance. Our Haynes 25 electrodes are available in a variety of diameters to suit specific welding processes and applications, offering optimal performance in GTAW and SMAW operations. When durability, strength, and resistance to high-temperature degradation are critical, Haynes 25 remains the alloy of choice.

Specification Haynes 25 Welding Electrodes



Property	Specification / Typical Value
Product Name	Haynes 25 Welding Electrodes (also sold as L-605 welding filler)
Universal / Trade Name	Haynes 25 / L-605
UNS Number	UNS R30605
ASTM / Industry Grade	ASTM F90 (commonly referenced); also available to AMS/AMS- and other customer specifications
Form	Welding electrodes / rods – available in multiple diameters for SMAW/GTAW/GMAW applications
Chemical Composition (typical ranges, wt%)	Cobalt (balance); Chromium 19.0–21.0%; Tungsten 14.0–16.0%; Nickel 9.0–11.0%; Iron ≤3.0%; Manganese 0.5–1.5%; Silicon 0.1–0.6%; Carbon 0.05–0.33%; traces of S, P & other residuals.

Microstructure / Metallurgy	Cobalt-based solid solution strengthened by Cr, W and Ni with stable high-temperature matrix; weld deposits exhibit good hot strength and oxidation resistance.
Typical Mechanical Properties (weld deposit, approximate)	Tensile strength and yield vary with post-weld treatment and cold work; designed for outstanding hot strength and creep resistance up to service temperatures—refer to customer datasheet for exact values.
Maximum Continuous Service Temperature	Continuous use to ~980°C (≈1800°F); retains useful strength at higher short-term exposures.
Corrosion / Oxidation Resistance	Excellent resistance to oxidation, carburization and sulphidation in high-temperature oxidizing/carburizing atmospheres.
Welding Processes	Recommended for GTAW (TIG) and SMAW (stick); GMAW (MIG) and other processes possible with appropriate wire/filler form. Submerged arc welding generally not recommended.
Welding Characteristics	Smooth, stable arc with low spatter when parameters are controlled; good bead appearance; performs well in most positions with appropriate electrode diameter.
Preheat / Interpass	Minimal preheat typically required; controlled interpass temperatures and low restraint recommended to avoid distortion and to preserve high-temperature properties.
Post-weld Treatment	Mechanical cold work or controlled heat treatments may be applied to optimize creep/rupture properties depending on application—follow engineering specification.
Available Diameters (typical)	Common electrode diameters from 1.6 mm up to 4.8 mm (and custom sizes on request) — also available as welding wire spools for GMAW/GTAW.
Packaging	Sealed cartons, moisture-resistant reels or spools; custom kitting and traceability available on request.
Typical Applications	Gas turbine components, combustion liners, afterburner parts, industrial furnace hardware, high-temp shafts and components requiring oxidation and hot-strength performance.
Standards & Equivalents	UNS R30605; also referenced as Alloy L-605, Haynes® 25; available to meet AMS/ASTM/ISO variants depending on customer requirement.
Supplier / Traceability	Supplied with material certification and batch traceability; chemical and mechanical test reports available per order.
Notes / Handling	Store in dry conditions; follow standard handling for high-performance cobalt alloy electrodes. Observe workplace safety for cobalt-containing materials.

Equivalent Grade Of Haynes 25 Welding Electrodes



Standard	Grade / Specification
AWS	ENiCrMo-4
UNS Number	N10276
ASTM	ASTM B574 / B575 / B619 / B622 / B626
ISO	14172 – ENiCrMo-4
Trade Name	Hastelloy C-276
DIN	2.4819

Haynes 25 Welding Electrodes Chemical Composition



Element	Minimum (%)	Maximum (%)
Carbon (C)	0.05	0.15
Manganese (Mn)	1.00	2.00
Silicon (Si)	–	0.40
Phosphorus (P)	–	0.040
Sulfur (S)	–	0.030
Chromium (Cr)	19.00	21.00
Nickel (Ni)	9.00	11.00
Tungsten (W)	14.00	16.00
Iron (Fe)	–	3.00
Cobalt (Co)	Balance	–

People Also Searched

Haynes 25 UNS R30605 electrodes, L-605 welding rods, cobalt alloy welding electrodes, ASTM F90 welding filler, R30605 TIG rods, cobalt-chromium alloy wire, heat-resistant welding alloy, Haynes L605 filler metal, aerospace-grade welding electrodes, high-temperature welding wire, oxidation-resistant filler metal, cobalt-based welding material, L605 MIG wire, UNS R30605 alloy supplier, Haynes 25 chemical composition, ASTM F90 cobalt alloy electrodes, cobalt superalloy welding rods, Haynes 25 welding wire price, high strength cobalt alloy, corrosion-resistant cobalt alloy, turbine welding electrodes, nickel-cobalt welding rods, cobalt-chromium superalloy, Haynes 25 mechanical properties, heat-resistant welding consumables, L605 aerospace material, cobalt alloy filler rods, cobalt-based TIG filler, UNS R30605 properties, ASTM F90 composition, Haynes 25 electrode specifications, cobalt superalloy electrode manufacturer, high-temp oxidation resistant alloy, Haynes L605 data sheet, R30605 electrode equivalent, cobalt-chromium welding wire, cobalt alloy electrode supplier.