The **ERNiCrFe-12 MIG & TIG Welding Wire** from **Metals And Welding Specialities** is a premium nickel-chromium alloy wire engineered for high-performance welding applications requiring superior corrosion and oxidation resistance. Classified under **UNS N06082** and conforming to **ASTM A5.14 ERNiCrFe-12**, this wire offers outstanding strength, thermal stability, and metallurgical integrity even in extreme environments. Designed to deliver reliable results in both **MIG** and **TIG** welding processes, it ensures smooth arc stability, minimal spatter, and excellent bead appearance across a wide range of base materials.

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This versatile **nickel alloy welding wire** is ideal for joining and overlaying components made of Inconel alloys, nickel-chromium-iron materials, and dissimilar metals. It maintains structural integrity at elevated temperatures, making it suitable for demanding industries such as petrochemical processing, power generation, heat exchangers, and furnace equipment. Its metallurgical composition promotes resistance to carburization, scaling, and chloride-induced stress corrosion cracking, ensuring long-term durability under mechanical and thermal stress.

ERNICRFE-12 Mig & Tig Welding Wire, ERNICRFE-12 Mig & Tig Welding Wire Manufacturers, ERNICRFE-12 Mig & Tig Welding Wire Suppliers, ERNICRFE-12 Mig & Tig Welding Wire Stockists, ERNICRFE-12 Mig & Tig Welding Wire Exporters

The **ERNiCrFe-12 filler metal** provides a precise chemical balance of nickel, chromium, and iron, resulting in a tough, stable weld deposit that resists cracking and maintains corrosion resistance in both oxidizing and reducing atmospheres. This wire performs exceptionally well in welding joints exposed to high-temperature gases or combustion byproducts, maintaining mechanical properties without degradation. When used for overlaying or cladding, it enhances surface resistance to oxidation and corrosion, extending the service life of components in aggressive environments.

At **Metals And Welding Specialities**, every spool of ERNiCrFe-12 welding wire is manufactured under strict quality control to ensure consistent wire feed, clean welds, and reliable performance. Whether you are fabricating process piping, turbine casings, or pressure vessels, this wire provides dependable fusion and metallurgical compatibility. Its clean burn characteristics and stable arc behavior make it a preferred choice for both automated and manual welding setups.

ERNICRFE-12 Mig & Tig Welding Wire in India, ERNICRFE-12 Mig & Tig Welding Wire Manufacturers in India, ERNICRFE-12 Mig & Tig Welding Wire Suppliers in India, ERNICRFE-12 Mig & Tig Welding Wire Stockists in India, ERNICRFE-12 Mig & Tig Welding Wire Exporters in India

The **ERNiCrFe-12 MIG & TIG Welding Wire** offers compatibility with multiple shielding gases and maintains weld integrity even in multi-pass applications. It is engineered for users who require precision, strength, and corrosion resistance in critical welding operations. Choosing this wire means choosing proven performance, trusted by professionals across industries where reliability cannot be compromised.

Specification ERNICRFE-12 Mig & Tig Welding Wire

Specification	Details
Product Name	ERNiCrFe-12 MIG & TIG Welding Wire
Company	Metals And Welding Specialities
UNS Number	UNS N06082
ASTM / Universal Standard	ASTM A5.14 – ERNiCrFe-12 (nickel-chromium-iron filler metal)
Typical Chemical Composition (wt%, deposited weld metal)	Nickel (Ni): ~60–65%; Chromium (Cr): ~20–24%; Iron (Fe): ~10–15%; Manganese (Mn): <1.5%; Silicon (Si): <0.5%; Carbon (C): <0.15%; Phosphorus (P) & Sulfur (S): trace
Typical Mechanical Properties (as-welded, deposited metal)	Tensile Strength: approx. 550–700 MPa (80–102 ksi); Elongation (A%): approx. 20–40%; Hardness: typically low to moderate, suitable for service at elevated temperature.
Welding Processes	MIG (GMAW) and TIG (GTAW) — suitable for manual, semi-automatic and automated operations.
Available Forms & Diameters	Solid wire on spools and coils; common diameters: 0.8 mm (0.030"), 1.0 mm (0.040"), 1.2 mm (0.045"), 1.6 mm (1/16"), 2.4 mm (3/32") — custom sizes available on request.

Recommended Shielding Gases	High-purity Argon for TIG; Argon or Argon/Helium blends for MIG; small additions of O_2 or CO_2 may be used for transfer characteristics in specified applications — follow welding procedure specification.
Typical Applications	Cladding, overlay and joining of nickel-chromium-iron alloys and Inconel-type materials; petrochemical process equipment, heat exchangers, furnace components, power generation, and wherever high temperature corrosion and oxidation resistance are required.
Corrosion & High-Temperature Performance	Good resistance to oxidation, carburization and chloride-induced attack at elevated temperatures; maintains mechanical stability in oxidizing and reducing atmospheres typical of industrial service.
Heat Treatment	Generally used in the as-welded condition for most applications; post-weld heat treatment depends on base material and component requirements — consult metallurgical guidance for critical components.
Packaging	Wire supplied on sealed spools with desiccant, standard spool weights (e.g., 5 kg, 15 kg, 20 kg) or as customer-specified coils; labeled with batch and heat number for traceability.
Surface Condition & Cleanliness	Bright, oil-free, and oxidation-minimized surface finish to ensure consistent feeding and clean weld deposition; stored and packaged to prevent moisture pick-up.
Quality & Certification	Manufactured under controlled quality assurance with traceable lot identification. Conformity to ASTM A5.14 available upon request; full material test report (MTR) and chemical analysis can be provided.
Handling & Storage Recommendations	Store in a dry, temperature-stable environment. Avoid prolonged exposure to moisture and contaminants. Use within recommended shelf-life for optimal welding performance.
Notes	Values listed are typical for ERNiCrFe-12 filler metal and intended for reference. For project-critical specifications, welding procedure qualifications, exact chemical limits, and certified test reports, contact Metals And Welding Specialities for the official datasheet and technical support.

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