

Metals And Welding Specialities is proud to present the Xyron 224 Welding Electrodes, a premium nickel-based welding electrode crafted for demanding cast iron repair and buildup applications. This electrode is ideally suited to restore gray cast iron components subject to wear, cracking or porosity, while delivering excellent machinability and metallurgical integrity. In many industrial contexts this electrode is referred to by its Universal Standard name "ENi-CI" (nickel-iron, cast iron), and is often matched in performance to electrodes conforming to the ASTM specification (for example, AWS A5.15 ENi-CI).



Table Of Content

- [What is Xyron 224 Welding Electrodes?](#)
- [Specification of Xyron 224 Welding Electrodes](#)
- [Equivalent Grade Of Xyron 224 Welding Electrodes](#)
- [Chemical Composition of Xyron 224 Welding Electrodes](#)
- [Xyron 224 Welding Electrodes Parameters](#)
- [People Searched for Xyron 224 Welding Electrodes](#)
- [Supply Cities of Xyron 224 Welding Electrodes](#)
- [Export Countries of Xyron 224 Welding Electrodes](#)

Every stick of Xyron 224 carries the designation of a nickel alloy electrode engineered for excellent crack resistance and low dilution on base metal. Although this electrode does not have a single formal UNS (Unified Numbering System) widely published, its chemistry follows that of a high-nickel cast iron welding filler, functionally corresponding to nickel-iron weld metal compositions used for cast iron repair. Designers and engineers often regard it within the same spectrum as typical Ni-Fe cast iron fillers.



Xyron 224 Welding Electrodes, Xyron 224 Welding Electrodes Manufacturers, Xyron 224 Welding Electrodes Suppliers, Xyron 224 Welding Electrodes Stockists, Xyron 224 Welding Electrodes Exporters

When you use Xyron 224 Welding Electrodes, expect consistent performance in AC or DC (straight polarity) welding with low amperage settings, which helps reduce heat input and minimize distortion in delicate castings. The graphite coating formulation uniquely stabilizes the arc, reduces spatter, and helps avoid side-arc issues common when welding contaminated or rough surfaces. The weld deposit exhibits excellent machinability, allowing post-weld drilling, tapping or turning to restore critical surfaces. The nickel-rich weld metal delivers superior crack resistance even under restrained conditions.

Technically speaking, the ASTM grade or AWS classification ENi-CI sets the benchmark for nickel cast iron electrodes used in repair and buildup. The deposit properties align to tensile strength around 50,000 psi (≈ 370 MPa) in typical data sheets of similar electrodes. The electrode is often used on thin section castings, engine blocks, gear housings, pump casings, cylinder heads, and other gray cast or alloy cast iron parts. Because of its controlled penetration and low dilution, it is ideal for out-of-position welding and for recovering worn sections with minimal disruption to the original casting geometry.



Xyron 224 Welding Electrodes in India, Xyron 224 Welding Electrodes Manufacturers in India, Xyron 224 Welding Electrodes Suppliers in India, Xyron 224 Welding Electrodes Stockists in India, Xyron 224 Welding Electrodes Exporters in India

At Metals And Welding Specialities, we ensure each batch of Xyron 224 electrodes is rigorously tested for coating integrity, arc stability, and deposit consistency before dispatch. Our supply chain maintains dry storage and controlled humidity to preserve flux performance. When welding, maintain a short arc length, apply stringer beads, and use techniques such as skip welding or peening between passes to relieve residual stress. Allow slow cooling to avoid cracking.

Because the weld deposit is fully machinable, post-repair finishing is efficient and predictable. The Xyron 224 electrode excels in joining cast iron to steel substrate, filling holes and porosity, repairing cracks, and rebuilding worn cast surfaces. In sum, this electrode has become a trusted choice in foundries, heavy machinery maintenance shops, and repair facilities alike.

Choose Xyron 224 Welding Electrodes from Metals And Welding Specialities when you require dependable, high-quality repairs on cast iron parts with precision machinability, minimal distortion, and robust performance under load.

Specification Xyron 224 Welding Electrodes



Property	Specification
Product Name	Xyron 224
Product Type	Coated (Shielded Metal Arc Welding) Electrode
Classification	224 (Xyron proprietary designation)
Intended Base Metals	Carbon steels & low-alloy steels
Coating Type	Rutile-cellulosic blended coating

Available Diameters (mm)	2.5, 3.2, 4.0, 5.0
Available Lengths (mm)	300, 350, 450 (depending on diameter)
Polarity	AC / DC+
Recommended Welding Positions	Flat, Horizontal, Vertical (up/down), Overhead
Recommended Current Range (A)	2.5 mm: 50–80 A; 3.2 mm: 80–120 A; 4.0 mm: 120–170 A; 5.0 mm: 160–230 A
Typical Deposit Tensile Strength	~520–600 MPa
Typical Yield Strength	~420–500 MPa
Typical Elongation (A%)	20–26%
Impact Toughness (Charpy V-notch)	Typically ≥ 27 J at 0°C (depending on weld procedure)
Deposition Efficiency	~70–85% (depending on operator and parameters)
Operating Temperature Range	For service temperatures up to ~350°C (consult application requirements)
Typical Welding Speed	Moderate – dependent on current, electrode size and joint design
Slag Characteristics	Easy to remove, medium-to-smooth slag profile
Arc Characteristics	Smooth, stable arc with good bead appearance
Storage & Handling	Store dry; keep in sealed containers at ambient temperature. Re-dry per manufacturer guidelines if moisture pickup occurs.
Typical Applications	General fabrication, structural welding, repairs, pipelines and pressure parts (subject to qualification)
Packaging	Boxes / kegs by diameter – standard commercial packaging
Quality / Traceability	Batch traceability; lot marking on packaging

Xyron 224 Welding Electrodes Parameters



Parameter	Value
Product	Xyron 224
Coating	Graphite-coated
Deposit	Nickel-alloy (machinable)
Base metals	Grey and alloy cast irons; can join cast iron to steel
Application method	Metallic arc welding
Current	AC or DC (straight polarity)
Recommended amperages	2.4 mm: 50–80 A; 3.2 mm: 70–110 A; 4.0 mm: 90–130 A
Standard diameters / sizes	2.5 mm, 3.2 mm, 4.0 mm (sizes available: 2.4 / 3.2 / 4.0 mm noted)

Tensile strength (weld metal)	~370 MPa (50,000 psi)
Welding positions	All positions (suitable for out-of-position welding)
Preheat (recommended)	Usually not required; for max machinability preheat to ~315°C
Post-weld cooling	Allow casting to slowly return to room temperature; peen to relieve stresses
Storage / re-drying	Store dry; if damp, re-dry 350°C for 2 hours
Typical applications	Engine blocks, cylinder heads, gears, pulleys, machine tables, pump housings, repairs

People Also Searched

ENi-CI electrode, ASTM ENiCl welding rod, nickel cast iron electrode, Xyron 224 electrode supplier, cast iron repair electrode, NiFe electrode for cast iron, graphite coated Ni electrode, cast iron welding rod, Xyron 224 specifications, ENi-CI cast iron filler, nickel iron electrode for gray cast iron, cast iron welding electrode machine, Ni-cl electrode AWS, electrode for cast iron to steel joining, cast iron rebuilding rod, machinable cast iron electrode, Xyron224 datasheet, cast iron crack repair electrode, electrode chart ENi-CI, Xyron 224 price, electrode for engine block repair, Ni cast iron welding rod, universal cast iron electrode, electrode for cylinder head repair, electrode for gear housing repair, nickel based cast iron filler, NiCl electrode performance, electrode for thin section cast iron, weld electrode ENi-CI, cast iron maintenance electrode, electrode for cast iron machinery, Xyron224 welding rod, Ni electrode cast iron joint, cast iron electrode ENiCl AWS, repair electrode for gray iron, coated Ni electrode for repair, cast iron deposition electrode