

ENiFe – CI (NiFe 60:40, NiFe 55:45)

Solid Welding Wire Solid Welding wire and rods are used for GMAW, GTAW and TIG, MIG welding of cast iron

Main Applications:

ENiFe-CI is used for welding of cast iron. This filler metal is extensively employed to overlay the cast iron rolls. It is also used to repair the castings. A preheat and interpass temperature of 175°C (350°F) minimum is recommended during welding, without which the weld and heat affected zones could develop cracks.

Standard specifications:

Alloy name*	Product forms	AWS		UNS	DIN 1736
NiFe 60:40 / NiFe 55:45	GMAW, GTAW and TIG, MIG welding wire or rod	A 5.15	ERNiFe-CI	W82002	2.4560

Ni 55 (AWS class not specified) is a nominally 55% Nickel wire. The lower Nickel content makes this alloy more economical than Ni 99. Weld deposits are usually machine-able, but under conditions of high admixture, the welds can become hard and difficult to machine. It is often used for repairing castings with heavy or thick sections. As compared to Ni 99, welds made with 55 Ni are stronger and more ductile, and more tolerant of phosphorous in the casting. It also has a lower coefficient of expansion than Ni 99, resulting in fewer fusion line cracks.

Chemical composition:

	Alloy name	Ni%	Fe%	C% (max)	Mn% (max)	Si% (max)	S% (max)	Cu% (max)	Al% (max)	Others % (max)
AWS	ENiFe-CI	45-60	Balance	2.0	2.5	4.0	0.03	2.5	1.0	1.0
VZPS	NiFe 60:40 NiFe 55:45	55-60	Balance	1.3	0.5	1.0	0.01	1.0	0.5	-

* Or under customer needs

Mechanical properties:

Tensile strength: 393-579 MPa (57-84 psi)

Yield strength: 296-434 MPa (40-64 psi)

Elongation: 6-13%

Product	Diameter, mm	Length, mm	Packing
Welding wire (MIG)	0.8, 1.0, 1.2, 1.6, 2.0, 2.4, 2.5, 3.2	-	S300/K300
Welding rods (TIG)	2.0, 2.5, 3.2, 4.0, 5.0	915 – 1000	Box
Electrode core wire	2.0, 2.5, 3.20, 3.25, 4.0, 5.0	250, 300, 350, 400, 450, 500	Box

** Other rods length available

Condition of Supply:

Binary Nickel-Iron (Ni-Fe) and Ni based complex welding alloys are supplied in welding rod and wires in standard length or length up to the consumers' request. For normal service conditions, the chemical compositions are available in various Ni contents according to the most of American and European standards.