



GB/T 13814 —

AWS A5.14 ERNiCrFeSi-1

EN ISO 14172 —

AK ERNiCrFeSi-1

Description: ERNiCrFeSi-1 is a nickel-chromium-iron-silicon welding alloy classified under AWS A5.14 for bare nickel alloy electrodes and rods. It is designed for welding heat- and corrosion-resistant nickel alloys, offering good weldability, stable arc performance, and reliable service in demanding environments.

Application: ERNiCrFeSi-1 is suitable for welding nickel-chromium-iron alloys and related dissimilar joints used in high-temperature and corrosive service. It can be applied in petrochemical equipment, furnace parts, heat exchangers, piping systems, and other components requiring oxidation resistance and weld stability.

Typical Chemical Composition(%):

	C	Si	Mn	S	P	Cr	Ni	Cu	Tl
Requirement	0.05-0.12	2.50-3.0	1.0	0.010	0.020	26.0-29.0	Rem.	0.30	---
Actual Result	0.08	2.76	0.60	0.005	0.002	27.82	Rem.	0.10	---
	N	Fe	Al	Nb+Ta	Mo	B	Zr	Co	W
Requirement	---	21.0-25.0	0.30	---	---	---	---	1.0	---
Actual Result	---	22.30	0.20	---	---	---	---	0.65	---

Typical Mechanical Properties:

	Tensile Strength (MPa)	Yield Stress (MPa)	Elongation (%)	Impact Values (J)
Requirement	≥620			
Actual Result	675			