

# AK E80C-Ni3

**Description:** E80C-Ni3 is a low-alloy, gas-shielded metal-cored welding wire classified under **AWS A5.28** for high-strength steel applications requiring enhanced low-temperature toughness. The higher nickel content significantly improves impact toughness and resistance to brittle fracture in subzero environments, making E80C-Ni3 suitable for offshore and cold-climate fabrication.

**Application:** E80C-Ni3 is frequently used in offshore oil and gas structures, marine and shipbuilding, heavy fabrication, and low-temperature structural projects.

## Typical Chemical Composition(%):

	C	Si	Mn	S	P	Cr	Ni	Mo	V
<b>Requirement</b>	0.12	0.90	1.50	0.03	0.025	—	2.75-3.75	—	0.03
<b>Actual Result</b>	0.058	0.62	1.28	0.002	0.013	—	3.26	—	0.01

## Typical Mechanical Properties:

	Tensile Strength (MPa)	Yield Stress (MPa)	Elongation (%)	Impact Values (J)
<b>Requirement</b>	550	470	≥24	≥27J(-75°C)
<b>Actual Result</b>	605	505	26	56