

Classifications

EN ISO 14341-A	EN ISO 14341-B	AWS A5.28	AWS A5.28M
G 42 4 M21 Z3Ni1Cu	G 49A 4U M21 ZSN2Cu	ER80S-G	ER55S-G
G 42 4 C1 Z3Ni1Cu	G 49A 4U C1 ZSN2Cu		

Characteristics and typical fields of application

NiCu-alloyed copper coated GMAW wire, for welding of weather-resistant constructional steels, standard constructional steels and special constructional steels.

NiCu 1-IG wire features good weld ability in the short arc mode at low voltage and in the spray arc process with high voltage. The mechanical properties of the weld deposit, the freedom of porosity and the bead appearance depend on the type of shielding gas used and on the other welding parameters.

The copper content in the welding wire leads to increased resistance to atmospheric corrosion in the weld deposit.

Base materials

Weather-resistant constructional steels, special grade constructional steels

S235JRG2Cu, S235J2G4Cu, S235J0Cu, S235JRW, S355J0Cu, S355J2G3Cu, S355J0W, 235J2W-S355J2W, S355K2W

ASTM A 588 Gr. A, B, C, K; A 618 Gr. II; 709 Gr. C

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Ni	Cu
wt.-%	0.1	0.5	1.1	0.9	0.4

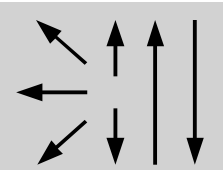
Mechanical properties of all-weld metal

Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+20 °C	-40 °C
u	500 (≥ 420)	580 (500 – 670)	26 (≥20)	130	≥ 47
s	460	540	27	130	

u untreated, as welded – shielding gas Ar + 15 – 25 % CO₂ or 100 % CO₂

s stress relieved, 600 °C/2h – shielding gas Ar + 15 – 25 % CO₂ or 100 % CO₂

Operating data

	Polarity:	Shielding gases:	ø (mm)
	DC (+)	Argon + 15 – 25 % CO ₂	0.8
		100 % CO ₂	1.0
			1.2

Approvals

DB (42.132.69), CE