

## SG Ni1

**CATEGORY** GMAW-GTAW Solid wires

**TYPE** Filler metal for fine grain steels and cold-tough steels.

**APPLICATIONS** Offshore requirements at working temperatures down to -60° C such as crane, vessel, rigs, platforms, pipelines for NACE requirements, boiler, tubing etc.

**PROPERTIES** Excellent impact properties at low temperatures due to the addition of Nickel and increased yield strenght above 460 N/mm2.

**CLASSIFICATION**

AWS	A 5.28: ER 80S-Ni1
EN ISO	14341-A: G 50 6 MZ G3Ni1
DIN	8575: SG Ni1

SUITABLE FOR	Materials	DIN	EN	ASTM
	shipbuilding	A, B, D, E, AH 32 - EH 36	same	Typical
	Unalloyed steels	St 33, St 37-2 - St 52-3	S185 - S355-S460	A 258 / A 516
	boiler steels	H I, H III, 17Mn4, 19Mn5	P235GH, P355GH	A 662 / A 387
	pipe steels	St 35.8, St 45.8	P235T1/T2, P460NL2	A 738 / A 612
	-	StE 210.7 TM, StE 480.7 TM	L210 - L480MB	A 299
	Fine grain steels	StE 255 to StE 460	S255 - S500 (NL1,2)	-
	API-standard	X 42, X65	X 42, X65	-

**APPROVALS** CE approved

**WELDING POSITIONS:**



**WELD METAL ANALYSIS %**

C	Mn	Si	Ni	S	P
0.08	1.05	0.50	0.9	0.017	0.007

**ALL WELD MECHANICAL PROPERTIES**

Heat Treatment	R <sub>p0,2</sub> (N/mm <sup>2</sup> )	R <sub>m</sub> (N/mm <sup>2</sup> )	A <sub>5</sub> (%)	Impact Energy (J) ISO-V	
				-40°C	-60°C
AW	> 470	> 560	> 24	70	> 47
PWHT 620°C / 2hr	430	540	31	110	

AW: as welded

**WELDING PARAMETERS / PACKING**

Welding Parameters			Packing		
D (mm)	Voltage (V)	Current (A)	spooling type	kg / spool	kg / pallet
0,8	15-24	60-200	D-200 / KD-300 / Drum	5 / 15 / 250	1000 / 1080 / 1000
1,0	16-32	80-300	D-200 / KD-300 / Drum	5 / 15 / 250	1000 / 1080 / 1000
1,2	18-34	120-380	D-200 / KD-300 / Drum	5 / 15 / 250	1000 / 1080 / 1000

**REDRYING TEMPERATURE** not required

**GAS ACC. EN ISO 14175:** M21