

Classifications

EN ISO14171-A	AWS A5.23
SZ2Ni1Mo	ENi1

Characteristics and typical fields of application

Union S Ni1 is a copper coated wire for submerged arc welding of unalloyed and low alloyed fine grain steel grades with minimum specified yield strength (MSYS) between 420 and 500 MPa. The wire is alloyed with 0,9% Nickel ($\leq 1,0\%$) and 0,25% Molybdenum to obtain increased strength and toughness in the weld metal. This wire composition has been designed mainly for multi-pass welding procedures, however the toughness level in the weld metal is less sensitive to dilution compared to unalloyed wires (however not recommended for 2-run technology), It is applied in off-shore-and heavy lifting constructions

Base materials

Steels up to a yield strength of 500 MPa.

Typical analysis of the wire (wt.-%)

C	Si	Mn	Ni	Mo	P	S
0.10	0.10	1.10	0.95	0.25	≤ 0.010	≤ 0.010

Typical Mechanical properties of all-weld metal (As welded)

Union S Ni1 with flux combination	Yield strength $R_{p0,2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact work ISO-V CVN J	
	MPa	MPa	%	-40°C	-60°C
UV C 418 TT	530	610	31	160	90

Approvals

ABS

Size and Packaging

Size mm	Spooling	Weight (Kg)
2.4	Basket (K415)	25
3.2	Basket (K415)	25
4.0	Basket (K415)	25