

Classifications

EN ISO 14171-A	AWS A5.23
SZ2Ni1Mo	ENi1

Characteristics and typical fields of application

Union S 2 NiMo 1 is a coppered 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 and recommended for typical welding procedures, like :

- single wire, tandem and multi wire configurations
- higher yield strength of weld metal (YS > 460 - 500MPa)
- especially for as welded condition, however also suitable to apply several heat - treatments
- also with highly productive procedures (higher heat input) for MSYS= 460 MPa)
- for robust Charpy-toughness level (-40°C / -60 °C)
- for robust CTOD values at -20°C / -40°C

Typical analysis of the wire (wt.-%)

C	Si	Mn	Ni	Mo	P	S
0.10	0.10	1.10	0.90	0.25	≤ 0.010	≤ 0.010

Typical fluxes to combine

SAW fluxes	EN ISO 14174
UV 418 TT	SA FB 1 55 AC H5
UV 421 TT	SA FB 1 55 AC H5

Packaging Formats

Diameter (mm)	Spooltype	Weight (kg)
2.5	B450 / K415-100	25
3.2	B450 / K415-100	25
4.0	B450 / K415-100	25