

CLASSIFICATIONS

EN ISO 636

AWS A5.28

W 3Ni1

ER80S-Ni1

KEY FEATURES AND APPLICATIONS

- 1% Nickel alloyed wire ideal for high-strength and low-temperature applications.
- Offers exceptional impact toughness even at low temperatures.
- Provides good arc stability and penetration resulting in high-quality welds.
- Excellent mechanical properties at subfreezing temperatures down to -50°C.
- Widespread usage across diverse industries, including structural steel fabrication, pipeline construction, naval architecture, pressure vessel manufacturing, offshore installations, mechanical engineering, heavy-duty transportation and general metalworking.

BASE MATERIALS

S355JR, S355J0, S355J2, S450J0, S355N-S460N, S355NL-S460NL, S355M-S460M, S355ML-S460ML, S460Q, S460QL, P355GH, P355NH, P420NH, P460NH, P355N-P460N, P355NH-P460NH, L245NB-L415NB, L245MB-L485MB, L360QB-L485QB

ASTM A 350 Gr. LF1; A 516 Gr. 65, 70; A 572 Gr. 42, 50, 60, 65; A 573 Gr. 65, 70; A 588 Gr. B, C, K; A 633 Gr. A, C, D, E; A 662 Gr. B, C; A678 Gr. B; A 707 Gr. L2; A 841 Gr. A, B, C; API 5 L X42, X52, X60, X65, X70, X52Q, X60Q, X65Q, X70Q

CHEMICAL COMPOSITION OF WIRE %

	C	Si	Mn	P	S	Ni	Cr	Mo	V	Cu	Al	Ti + Zr
MIN	0.06	0.50	1.00	-	-	0.80	-	-	-	-	-	-
MAX	0.14	0.90	1.60	0.020	0.020	1.50	0.15	0.15	0.03	0.35	0.02	0.15

Single values are maximum values according to EN ISO 636

MECHANICAL PROPERTIES OF ALL-WELD METAL - TYPICAL VALUES

Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)	Impact ISO-V (J)	Test Temperature
480	600	26	100	-50°C

Test data for mechanical properties are not guaranteed since actual as welded conditions depend on numerous variables

OPERATING DATA

Shielding Gases

Polarity

EN ISO 14175 - I1

DC-

PACKAGING AND AVAILABLE SIZES

Part Number	Diameter (mm)	Length (mm)	Weight (kg)	Packaging
XP15374	1.6	1000	5	PAP 20 Tube
XP15376	2.4	1000	5	PAP 20 Tube
XP15378	3.2	1000	5	PAP 20 Tube